Serviceanweisung
Service manual

160 RC Ident-Nr. 4255800
200 RC Ident-Nr. 4256100

Inhaltsverzeichnis

Queens 160

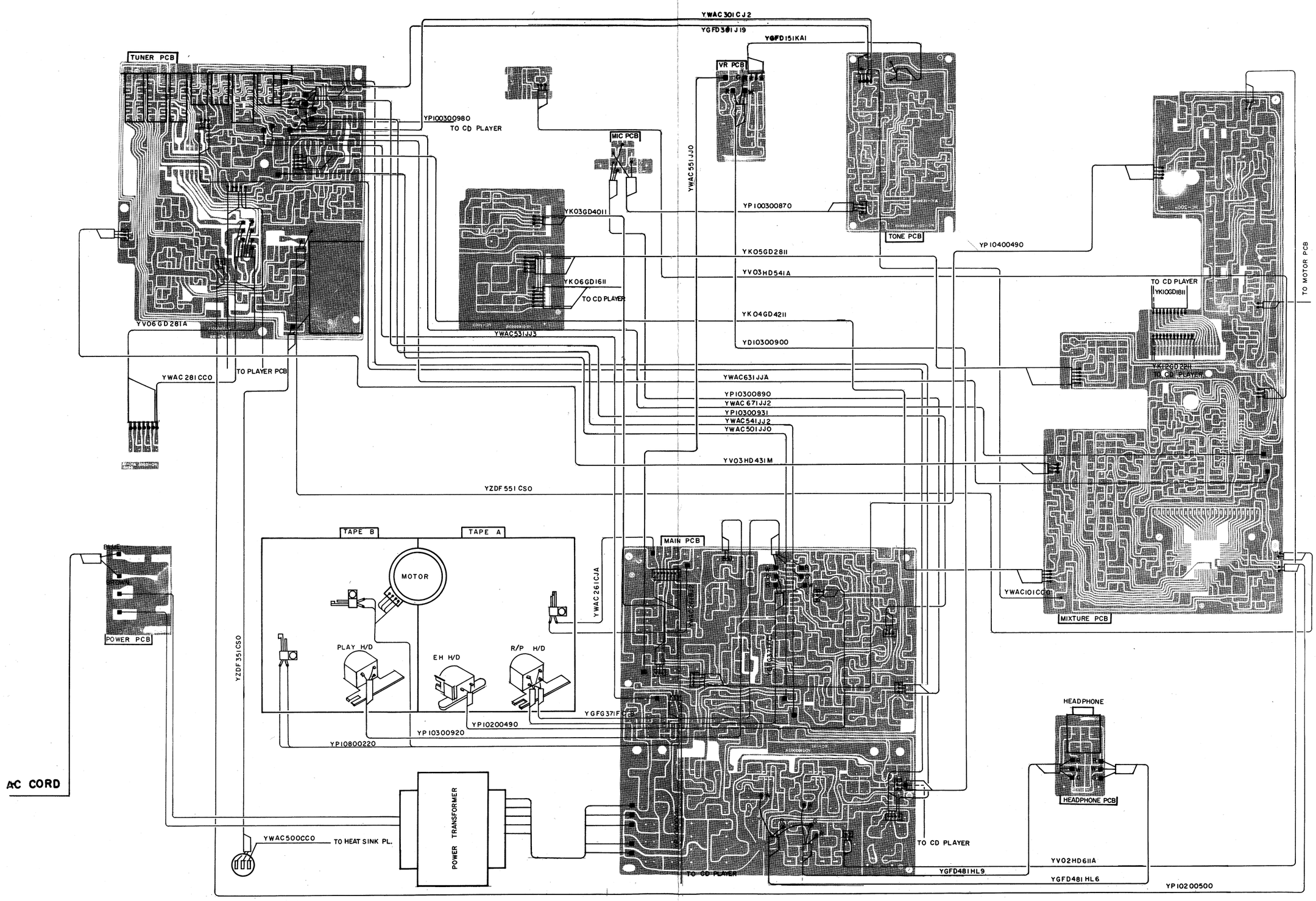
Subwoofer

Table of contents

Queens 160

Subwoofer

Verdrahtungsplan Queens 160
Wiring diagram Queens 160



Schaltbild Queens 160 (ohne CD-Spieler)

Circuit diagram Queens 160 (without CD player)

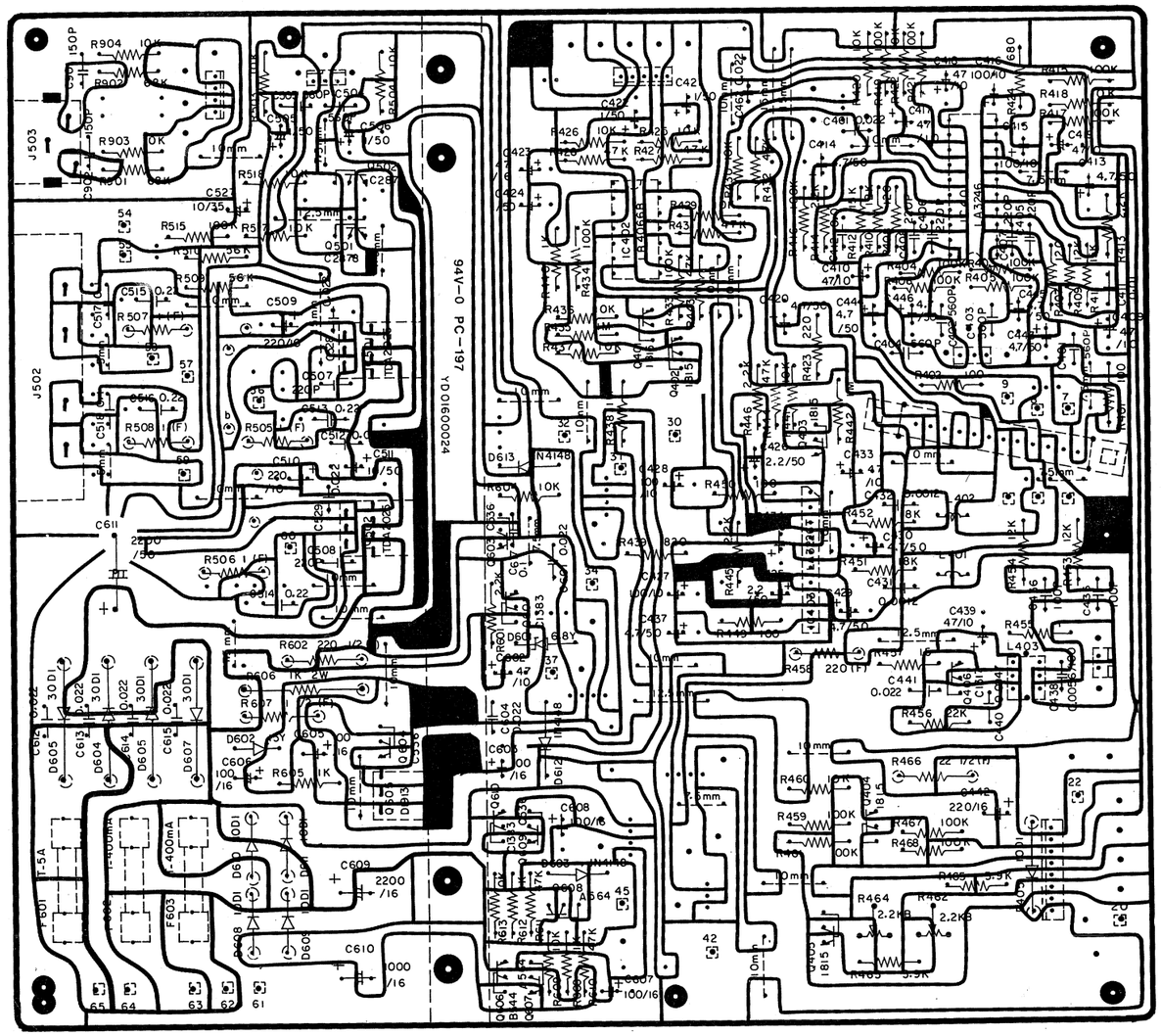
PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
IC 1	1.53	1.53	1.53	0	5.98	5.13	0.54	1.86	1.43	1.09	0.72	5.5	1.34	1.34	2.35	2.35														
IC 2	7.02	2.32	1.65	2.82	2.72	0.6	0	0.1	0.23	1.34	1.32	1	1.33	1.33	1.33	0.79														
IC302	0	5.7	5.5	0	0	0	0	0	0	0.1	0	0	0	0																
IC303	0	6.0	7.5	6.0	1.3	1.3	11.1	11.7	7.5	6																				
IC401	0	0	0.57	3.22	3.15	0	0	3.23	4.81	0	8	7.99	7.22	0	0	3.24	3.25	0.57	0	0										
IC402	0	0	0	0	13.68	13.68	0	0	0	0	0	0.1	0.1	13.91																
IC403	0.62	0	11.11	0	1.16	8.61	4.1	0	0.62	8.21																				
IC501	13.61	0.4	29.2	0	0.4	0	13.1																							
IC502	13.1	0.4	29.2	0	0.4	0	13.1																							
IC503	10	10	10.02	10.04	0	9.9	0	0	11.46																					
IC901	1.27	0.74	2.91	10.89	2.97	0.74	1.27																							
IC301	4	5.5	4	4	4	0	0	0	0	2.87	4	4	0	0	2.47	2.3	0	0	5.5	0	0	0	4	4	4	4	4	4	4	4

PIN NO.	E	C	B
Q1	11.64	0.68	10.93
Q2	0	3.11	0.62
Q4	0	0	0.62
Q201	0	8.2	0.6
Q202	0.6	8.2	1.09
Q203	1.09	13.84	1.67
Q207	0	0	0.68
Q204	2.93	0	4.87
Q205	2.93	0	4.87
Q206	2.93	0	2.65
Q208	0	4.98	0.36
Q210	5.47	13.8	6.08
Q401	0	13.91	0.1
Q402	0	0.1	0.62
Q403	0	1.17	0
Q404	0	0	0.6
Q405	5.5	7.8	0
Q406	0.29	9.45	-0.34
Q501	0	0	0.7
Q502	0	0	0.7
Q601	6.1	18.9	6.8
Q603	0	0	6.7
Q604	14.5	29	15.1
Q605	14	29	14.5
Q606	-9	-10.4	-10.5
Q609	-10.5	-10.4	-10.1
Q610	9.3	10.6	10.3
Q801	0.4	4.37	1.03
Q802	0.4	4.35	1.04
Q803	5.7	10.53	6.3
Q804	5.7	10.53	6.3
Q805	0.12	3.9	0.78
Q806	0.12	3.9	0.78

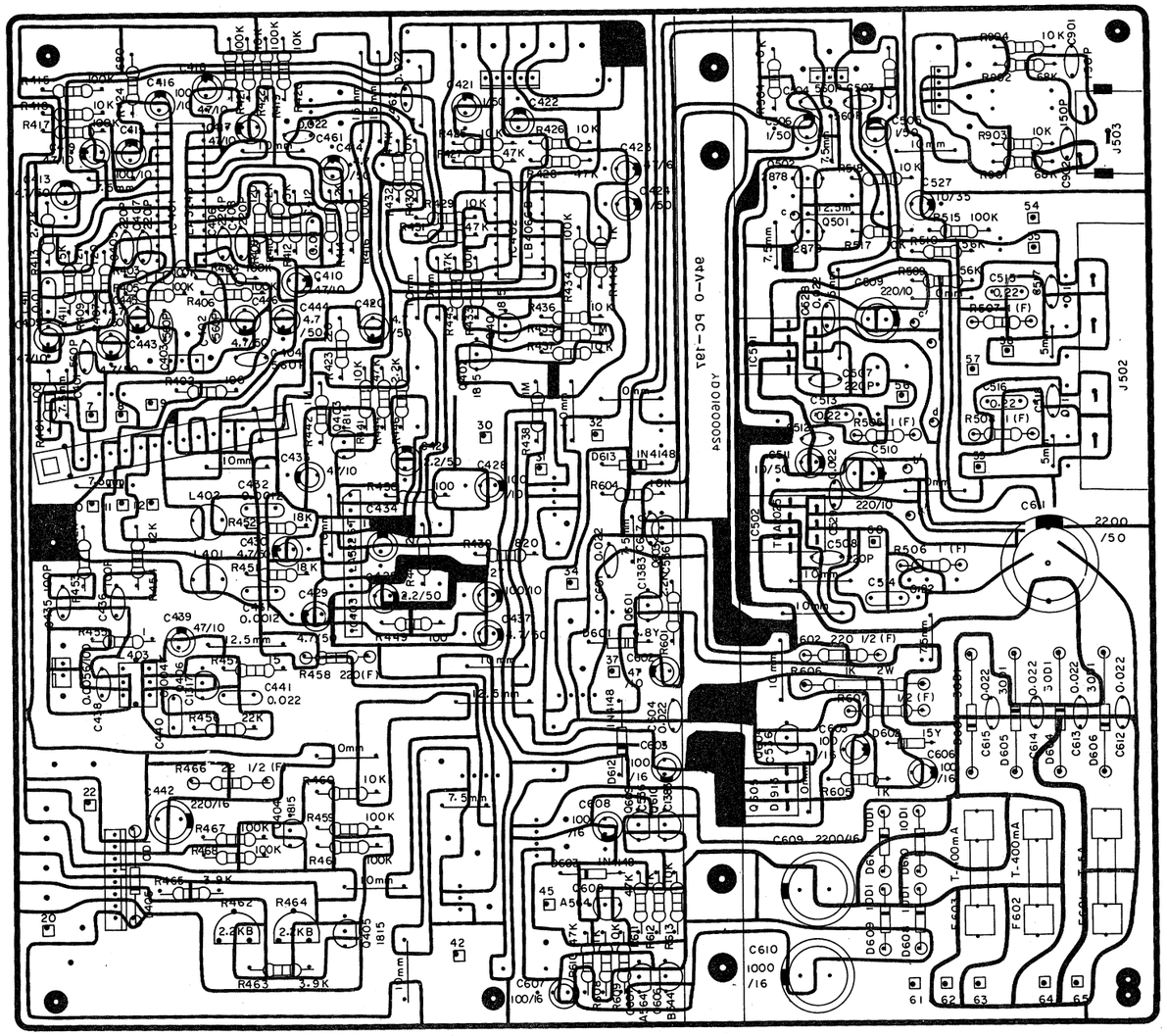
0	VR UP	11	P4
1	VR DUN	12	P5
2	NEXT/FF	13	P6
3	BACK/FB	14	P7
7	POWER	15	P8
8	P1	16	P9
9	P2	17	1"
10	P3	18	0
28	PLAY/PAUSE		
29	STOP		

Hauptplatine Queens 160
Main P.C.B. Queens 160

Leiterbahnseite
Bottom view

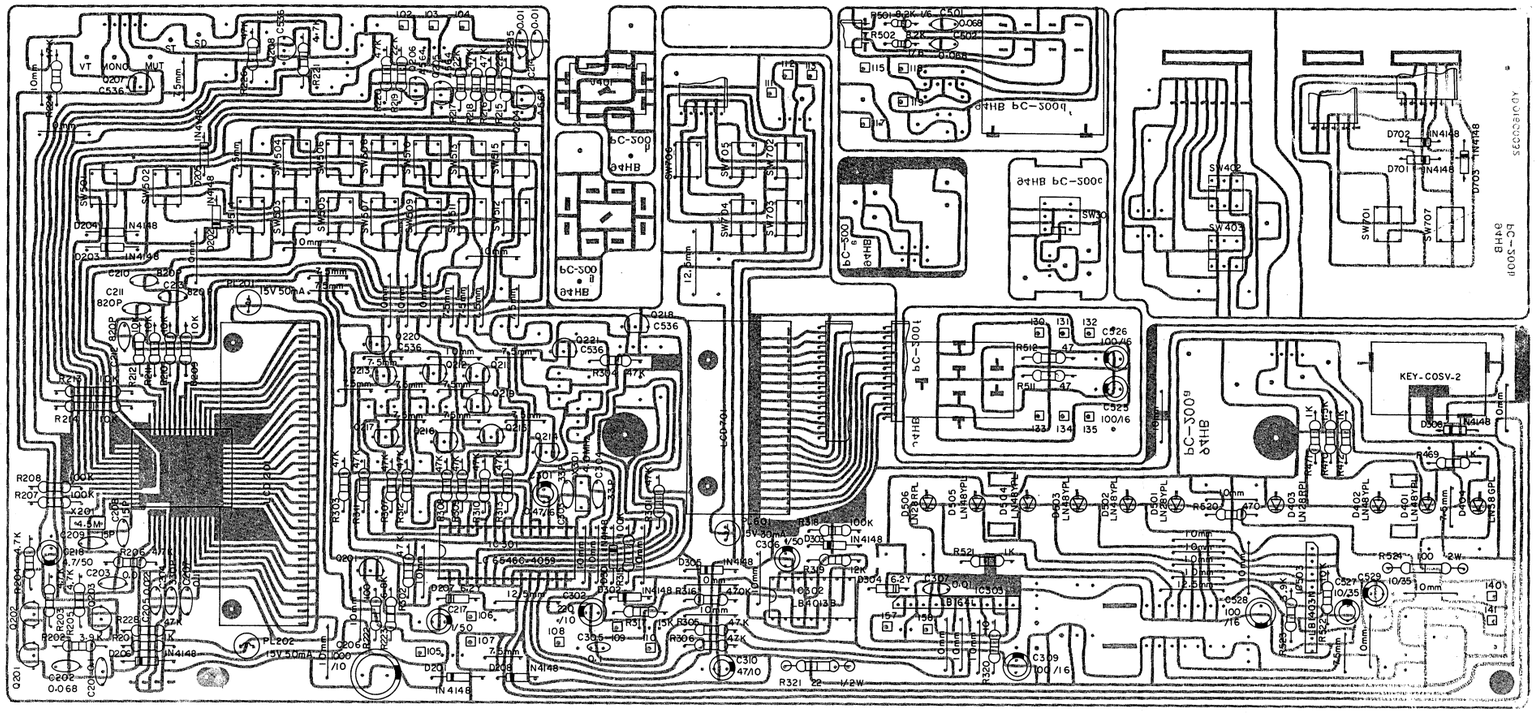


Bestückungsseite
Top view

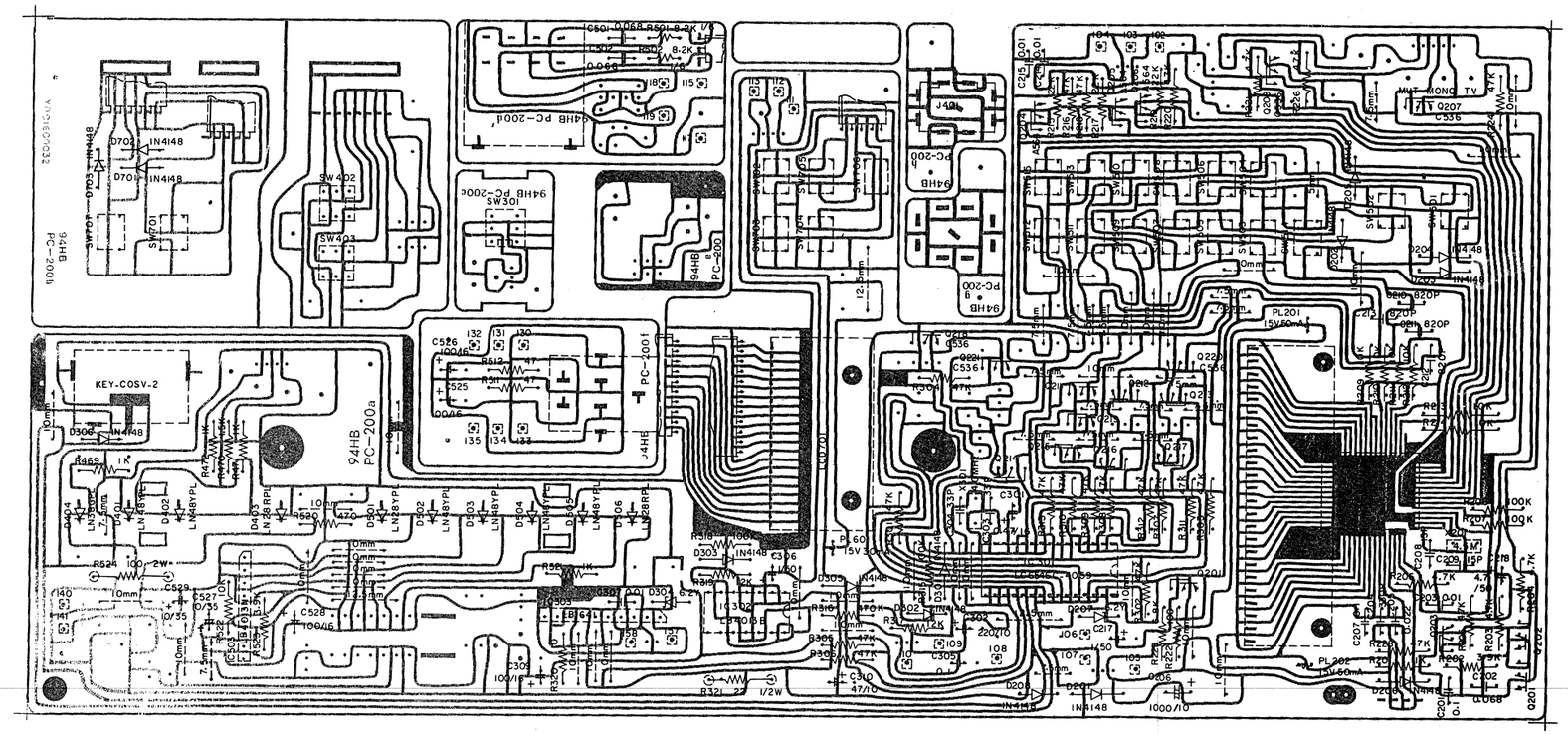


Displayplatine/Schalterplatinen CD–Tape, Queens 160
Display P.C.B./Switch P.C.B.'s CD–Tape, Queens 160

Bestückungsseite
Top view

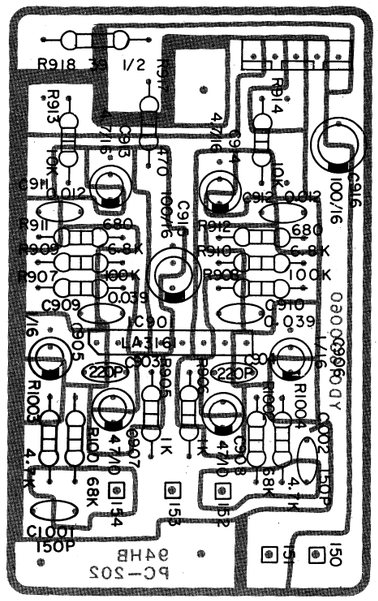


Leiterbahnseite
Bottom view



Phono-Vorverstärkerplatine
Pre-amplifier P.C.B. phono

Bestückungsseite
Top view



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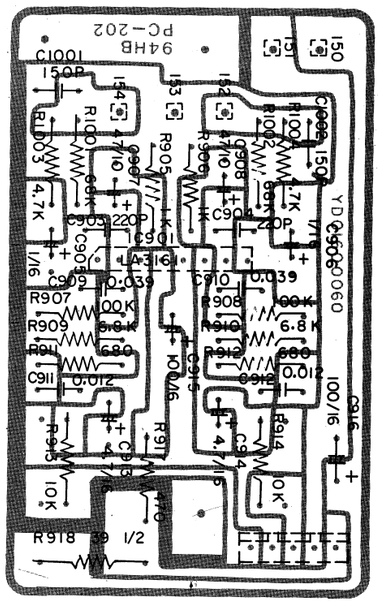
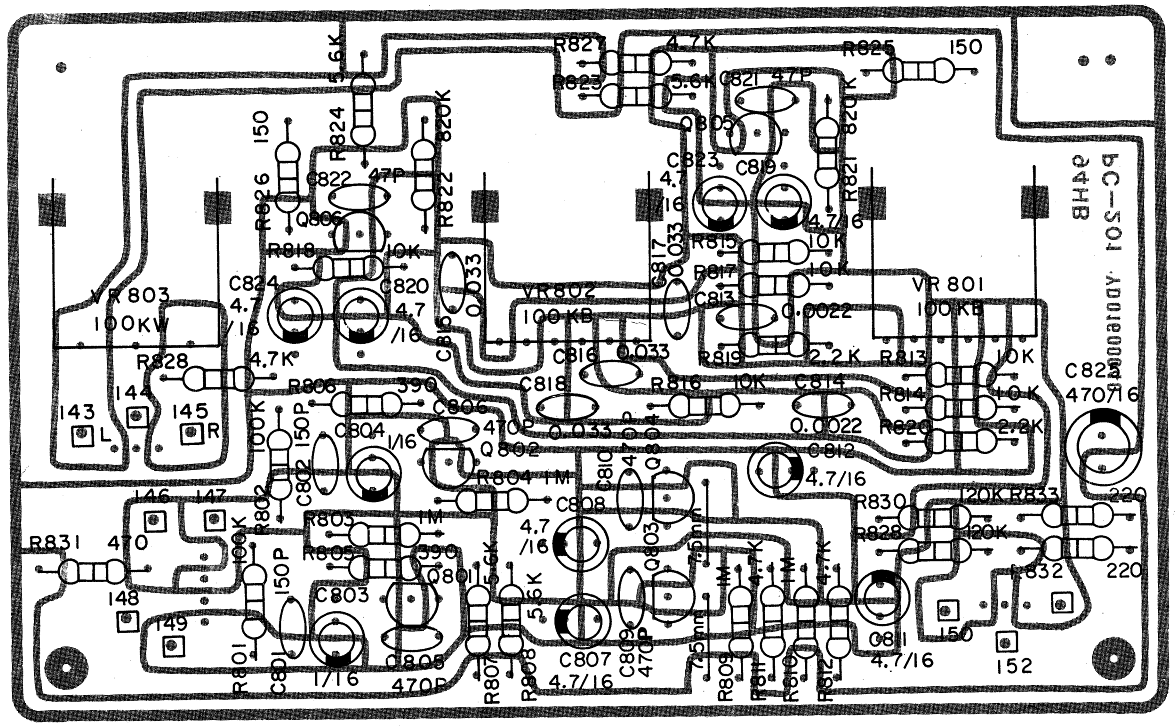
Bottom view

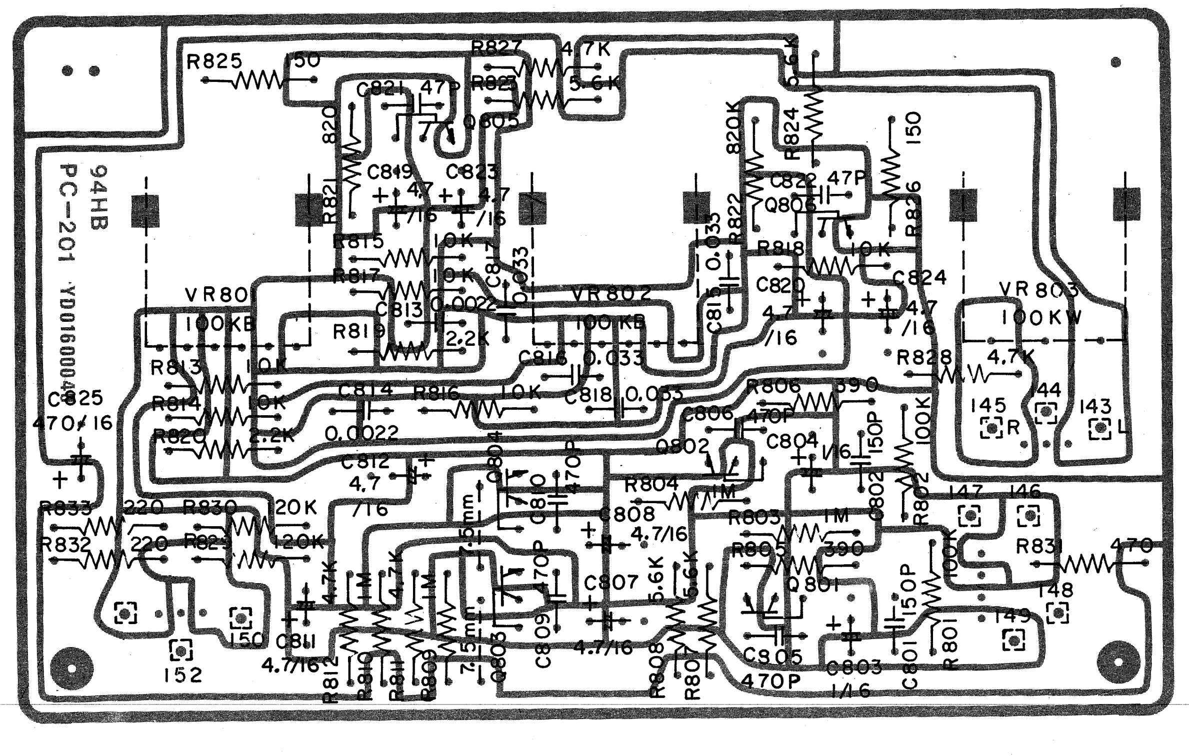


Klangreglerplatine Queens 160
Tone P.C.B. Queens 160

Bestückungsseite
Top view

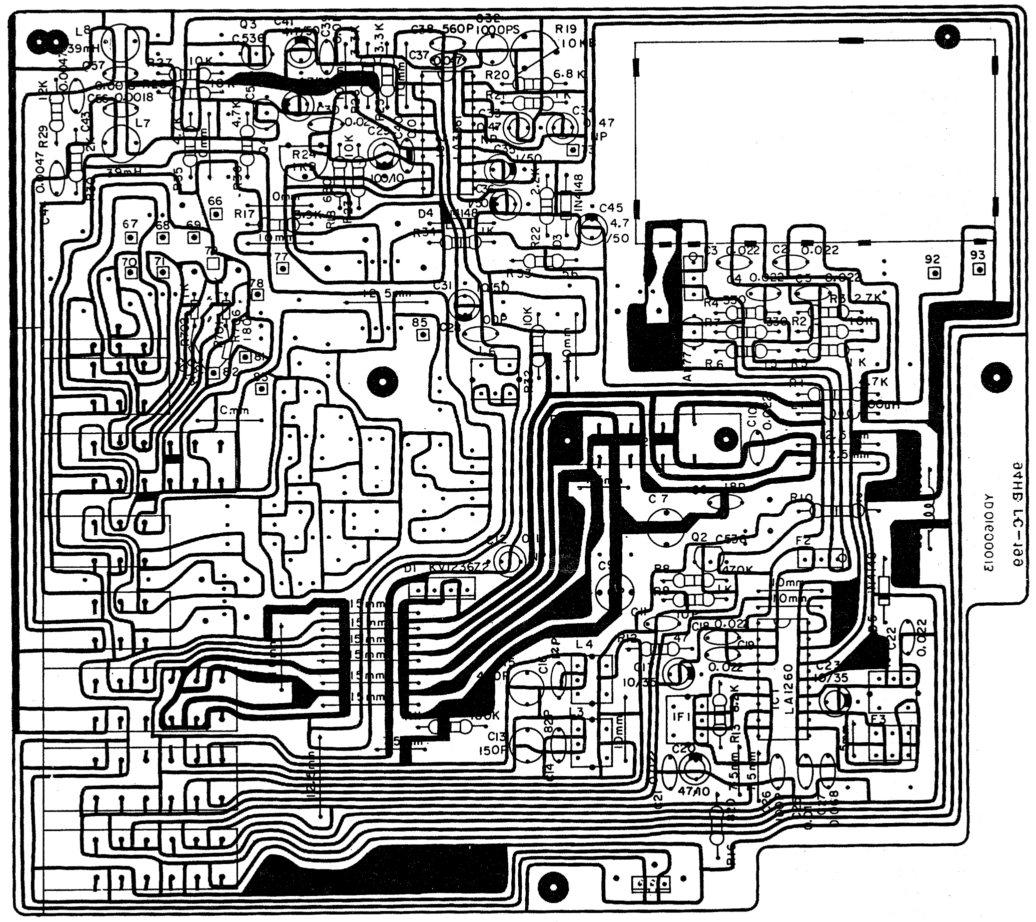


Leiterbahnseite
Bottom view

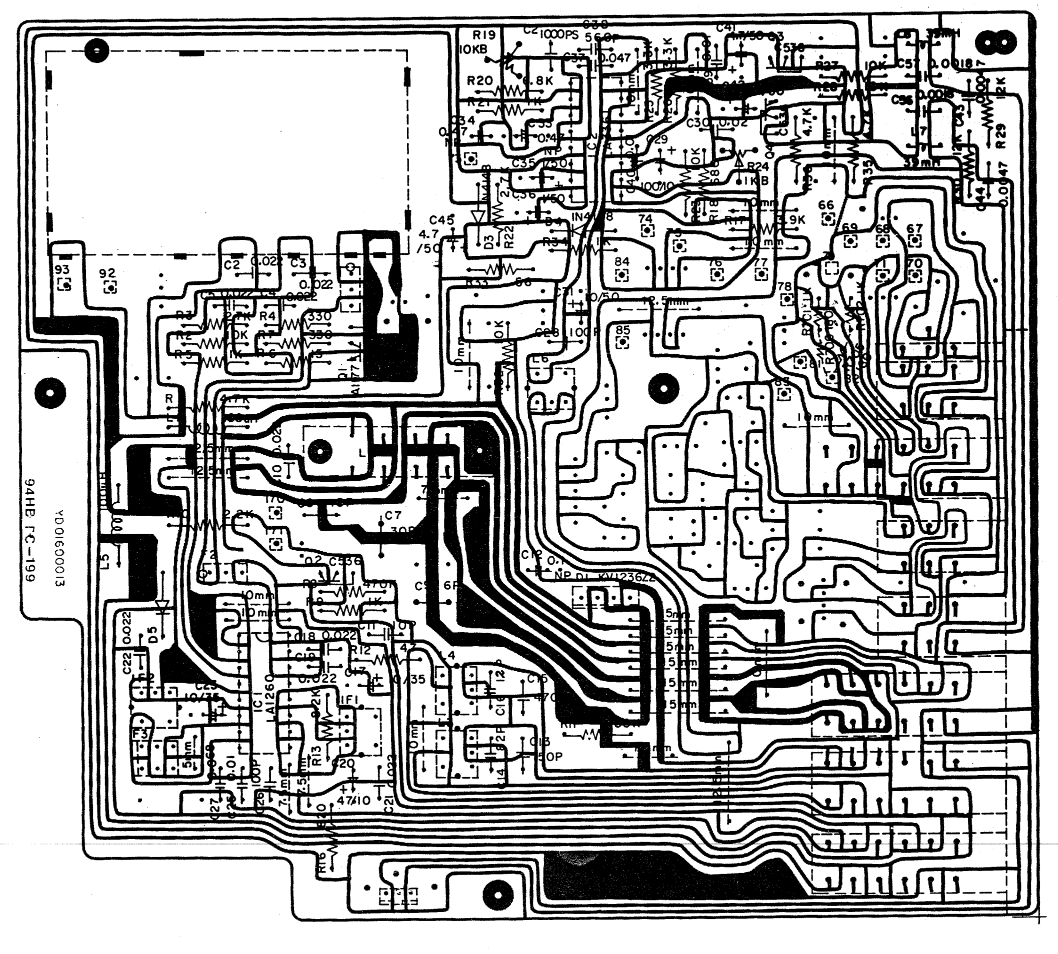


Tunerplatine Queens 160
Tuner P.C.B. Queens 160

Bestückungsseite
Top view



Leiterbahnseite
Bottom view



Ersatzteilliste elektrisch Queens 160 (ohne CD)
Spare parts list electrical Queens 160 (without CD Player)

Bestell-Nr./ Part. No.	Bezeichnung	Description	Position	Preisgruppe/ Price key
46 846 00	Tunerplatine	Tuner P.C.B.		F 3
48 014 00	Hauptplatine	Main P.C.B.		E 9
46 847 00	Displayplatine	Display P.C.B.		F 8
46 848 00	Klangreglerplatine	Tone P.C.B.		D 1
46 849 00	Schalterplatine CD-Tape	Control P.C.B. CD-Tape		C 5
46 850 00	Phono-Vorverstärkerplatine	Pre-amplifier phono		C 3
26 797 00	IC LA 1260	IC LA 1260	IC 1	B 4
26 476 00	IC LB 1403 N	IC LB 1403 N	IC 503	B 2
46 829 00	IC LB 1641	IC LB 1641	IC 303	B 2
31 481 00	IC UPD 1708 A	IC UPD 1708 A	IC 201	D 2
38 286 00	IC TDA 2025	IC TDA 2025	IC 501/502	B 7
32 997 00	IC LA 3161	IC LA 3161	IC 901	B 0
40 037 00	IC LA 3226 T	IC LA 3226 T	IC 403	B 2
40 799 00	IC LA 3246	IC LA 3246	IC 401	B 2
21 596 00	IC LA 3361	IC LA 3361	IC 2	B 1
21 330 00	IC LC 4013 B	IC LC 4013 B	IC 302	B 5
32 998 00	IC TC 4066 BP	IC TC 4066 BP	IC 402	B 0
46 830 00	IC LC 6546C – 4059	IC LC 6546C – 4059	IC 301	C 4
45 988 00	Transistor 2 SC 564 Q	Transistor 2 SC 564 Q	Diverse	A 2
37 957 00	Transistor 2 SA 1177 E	Transistor 2 SA 1177 E	Q 1	A 3
13 545 00	Transistor 2 SC 536 NP-F	Transistor 2 SC 536 NP-F	Diverse	A 3
08 012 00	Transistor 2 SC 1317	Transistor 2 SC 1317	Q 406	A 5
03 713 00	Transistor 2 SC 1383 Q	Transistor 2 SC 1383 Q	Q 601/610	A 7
24 533 00	Transistor 2 SC 2634 S	Transistor 2 SC 2634 S	Q 801-806	A 3
44 764 00	Transistor 2 SD 1913 R	Transistor 2 SD 1913 R	Q 605	A 1
34 691 00	Transistor 2 SC 2878	Transistor 2 SC 2878	Q 501/502	A 3
11 241 00	Diode 1 N 4148	Diode 1 N 4148	Diverse	A 2
40 288 00	Diode KV 1236 Z 2	Diode KV 1236 Z 2	D 1	B 7
12 039 00	Diode 10 D 1 Sil.	Diode 10 D 1 Sil.	Diverse	A 4
26 552 00	Diode 30 D-1 FC	Diode 30 D-1 FC	D 604-607	A 4
21 413 00	Zenerdiode GZA 15 Z	Zenerdiode GZA 15 Z	D 602	A 2
21 350 00	Zenerdiode GZA 6,2 X od. Y	Zenerdiode GZA 6.2 X or Y	D 207/304	A 3
21 745 00	Zenerdiode GZA 6,8 Y	Zenerdiode GZA 6.8 Y	D 601	A 3
29 597 00	Leuchtdiode SLR-34VR5 (rot)	LED SLR-34VR5 (red)	D 403/506	A 4
32 768 00	Leuchtdiode SLR-34 DU5 (orange)	LED SLR-34 DU5 (orange)	D 401/402/501-505	A 4
37 414 00	Leuchtdiode SEL 2310 S GN (grün)	LED SEL 2310 S GN (green)	D 404	A 2
12 110 00	Filter Keramik 10.7-B	Ceramic filter 10.7-B	F 1, 2	A 6
46 831 00	Ferritantenne LW/MW	Bar antenna coil LW/MW	L 2	B 4
37 882 00	Spule 39mH	Choke coil 39mH	L 7, 8	A 3
34 320 00	Drossel 100 µH	Choke coil 100 µH	L 1, 5	A 3
45 992 00	Keramik-Filter SFZ 455	AM ceramic filter	F 3	B 0
24 372 00	Spule AM	Filter coil	L 6	A 6
34 322 00	Spule AM	AM IFT coil	IF 2	A 4
40 293 00	Spule FM-ZF LB 0511	FM Det coil	IF 1	A 4
34 324 00	Spule Netzleitung	Air coil	L 601/602	A 1
40 291 00	Spule MW-Oszillator LB 0541	MW osc. coil	L 4	A 3
34 325 00	Spule Löschoszillator	Tape osc. coil	L 403	A 5
45 991 00	Spule LW-Oszillator	LW osc. coil	L 3	A 4
34 326 00	Fangspule	Trap coil	L 401/402	A 4
31 482 00	Quarz 4,5 MHz	X-tal 4.5 MHz	X 201	A 8
46 839 00	Keramik-Oszillator CSA 4,00 MHz	Ceramic resonator CSA 4.00 MHz	X 301	A 7
46 834 00	Drehwiderstand 100 K Balance	Rotary VR 100 K Balance	VR 803	B 1
46 835 00	Drehwiderstand 100 K Klang	Rotary VR 100 K Tone	VR 801/802	B 2
46 836 00	Motor-Drehwiderstand 100 K Volumen	Rotary VR with motor 100 K Volume	VR 501	D 0
37 022 00	Trimmpoti 1 K	Semi-fixed resistor 1 K	R 24	A 4
37 444 00	Trimmpoti 2,2 K	Semi-fixed resistor 2.2 K	R 462/464	A 3
37 443 00	Trimmpoti 10 K	Semi-fixed resistor 10 K	R 19	A 3
18 576 00	Sicherungswiderstand 1 Ohm/¼ W	Fuse resistor 1 Ohm/¼ W	R 505-508	A 2
18 558 00	Sicherungswiderstand 220 Ohm/¼ W	Fuse resistor 220 Ohm/¼ W	R 458	A 4
32 072 00	Sicherungswiderstand 22 Ohm/½ W	Fuse resistor 22 Ohm/½ W	R 321/466	A 3
34 335 00	Sicherungswiderstand 39 Ohm/½ W	Fuse resistor 39 Ohm/½ W	R 918	A 1
31 823 00	Sicherungswiderstand 220 Ohm/½ W	Fuse resistor 220 Ohm/½ W	R 602	A 7
26 168 00	Sicherungswiderstand 1 Ohm/½ W	Fuse resistor 1 Ohm/½ W	R 607	A 2
44 086 00	Trimmer-Kond. VTC 51A 144A 6PF	Trimmer capacitor 6 pF	C 9	A 4
24 377 00	Trimmer-Kond. VTC 51F 133A 30PF	Trimmer capacitor 30 pF	C 7	A 3
46 837 00	Display Tuner LTP6M9011A	Display Tuner LTP6M9011A		C 7
46 838 00	Display CD LTP4R2011A	Display CD LTP4R2011A		C 6
40 306 00	Tuner FE 407/ET-A036	Tuner FE 407/ET-A036		D 6
46 840 00	Lämpchen 15 V 30 mA	Pilot lamp 15 V/30 mA		A 4
46 994 00	IR-Empfänger Queens 160	IR receiver Queens 160		C 2
46 841 00	Netztrafo	Power transformer		D 8
34 545 00	Tipptaste	Tact switch	Diverse	A 3
34 033 00	A/W-Schiebeschalter	Rec./Playback switch	S 401 a-d	A 8
44 089 00	Netzschalter	Power switch	SW 301	B 0
29 747 00	Tastenschalter	Push switch	SW 402/403	B 1
46 832 00	Tastensatz 7fach Funktion	Function switch	SW 1-8	C 6
34 034 00	Mikrofonbuchse	Microphone jack		B 3
46 842 00	Buchse Kopfhörer	Head phone jack		B 0
24 358 00	Buchse Antenne	Antenna jack		A 6
34 338 00	Buchse Lautsprecher (Doppel)	Speaker DIN jack		A 7
32 952 00	Buchse Chinch CD	2-Pin RCA jack		A 6

ALIGNMENT PROCEDURE

MODEL Q160

1

LW

GENERAL ALIGNMENT CONDITIONS

1. Signal input must be kept as low as possible to avoid overload and clipping. (Use highest possible sensitivity of output indicator.)
2. Signal input should be kept as low as possible to avoid A.G.C action. (Set output indicator to highest sensitvity.)
3. Marker insertion and amplitude should not distort the oscillator and amplitude should not distort the oscilloscope trace.
4. Standard modulation is 400 Hz 30% .

INSTRUMENT REQUIRED

Signal source	Output indicators
* AM signal generator *	* AC millivolt meter *
* Radio sweep generator *	* Oscilloscope *
* Sweep oscilloscope *	

STEP	CONNECT SIGNAL SOURCE TO -	CONNECT OUTPUT INDICATOR -	SET SIGNAL OR INSERT MARKER	SET RADIO DIAL TO -	ADJUST	ADJUST FOR -
1	Set function selector switch on the front panel to " LW " position.					
2	Sweep generator connected to a loop or short piece of wire placed near AM antenna	Sweep oscilloscope connected to wire pin of the C 43 or C 44 and bolume to maximun	See amplitude of 455 KHz	Quiet point on band near 515 KHz	IF 2	Amplitude of filter
3	Signal generator connected to a loop	AC millivolt meter and oscilloscope connected across speaker	137 KHz	137 KHz	LW OSC L 3	maximum
4			290 KHz	290 KHz		
5			170 KHz	170 KHz	LW BAR ANT COIL	
6			270 KHz	270 KHz	RF Trimmer C 7	
7	Repeat step 3 through 6 as necessary to obtain maximum sensitivity on station.					

ALIGNMENT PROCEDURE

MODEL Q160

2

MW

GENERAL ALIGNMENT CONDITIONS

1. Signal input must be kept as low as possible to avoid overload and clipping. (Use highest possible sensitivity of output indicator.)
2. Signal input should be kept as low as possible to avoid A.G.C. action. (Set output indicator to highest sensitivity.)
3. Maker insertion and amplitude should not distort the oscillator and amplitude should not distort the oscilloscope trace.
4. Standard modulation is 400 Hz.

INSTRUMENTS REQUIRED

Signal source
* AM signal generator *
* Radio sweep generator *
* Sweep oscilloscope *

Output indicators
* AC millivolt meter *
* Oscilloscope *

STEP	CONNECT SIGNAL SOURCE TO -	CONNECT OUTPUT INDICATOR -	SET SIGNAL OR INSERT MARKER	SET RADIO DIAL TO -	ADJUST	ADJUST FOR -
1	Set function selector switch on the front panel to " MW " position.					
2	Sweep generator connected to a loop or short piece of wire placed near AM antenna	Sweep oscilloscope connected to wire pin of the C 43 of C 44 and volume to mzximum	See amplitude of 455 KHz	Quiet point on band near 513 KHz	F 2	Ampltude of filter
3	Signal generat-or connected to a loop	AC millivolt meter and oscilloscope connected across spraker	513 KHz	513 KHz	AM OSC L 4	maximum
4			1620 KHz	1620 KHz		
5			600 KHz	600 KHz	AM BAR ANT COIL	
6			1400 KHz	1400 KHz	RF Trimmer C - 9	
7	Repeat step 3 through 6 necessary to obtain maximum sensitivity on station.					

ALIGNMENT PROCEDURE

MODEL Q160

3

FM

GENERAL ALIGNMENT CONDITION

1. Signal input must be kept as low as possible to avoid ocerload clipping. (Use highest possitivity of output indicator.)
2. Makers must be accurate (crystal controlled or calibrated). The 10.7 MHz marker used in each section of the FM alignment must be the same.
3. Signal input should be kept as low as possible to avoid A.G.C. action. (Set output indicator to highest sensitivity.)
4. FM signal generator RF output frequency must be monitoring.
5. Standard modulation is 1 KHz (40 KHz)

INSTRUMENTS REQUIRED

Signal sources
* FM signal generator *
* Radio sweep generator *
* Sweep oscilloscope *
* Frequency counter *

Output indicators
* AC millivolt meter *
* Oscilloscope *
* 114 KHz signal generator *

STEP	CONNECT SIGNAL SOURCE TO -	CONNECT OUTPUT INDICATOR TO -	SET SIGNAL OR INSERT MARKER	SET RADIO DIAL TO	ADJUST	ADJUST FOR -
1	Set function selector switch on the front panel to " FM " position.					
2	Radio sweep generator connect to FM front ent tuner pin 3	Oscilloscope connected to wire pin of the C 43 of C 44 and volume VR to maximum	10.6 10.7 10.8 MHz marker	Quiet scale pointer on band	IF 1	Straightness and symmetry of " S " curve with 10.7 MHz makerd at zero crossover

ALIGNMENT PROCEDURE

MODEL Q160

4

MPX

GENERAL ALIGNMENT CONDITION

1. Adjust FM signal generator output to 1mV (60dB) with MPX modulation 1 KHz

   Deviation = 33.75 KHz Pilot = 6 KHz

INSTRUMENTS REQUIRED

Signal source	Output indicator
* FM signal generator *	* Frequency counter *
* Stereo signal generator *	* AC millivolt meter *
	* Oscilloscope *

STEP	CONNECT SIGNAL SOURCE TO -	CONNECT OUTPUT INDICATOR TO -	SET SIGNAL	SET RADIO DIAL	ADJUST	ADJUST FOR -
1	Set function selector switch on the front panel to " FM STEREO " Position.					
2	FM signal generator connected to FM aerial	Frequency counter connect to MPX test point	98 MHz and modulation off, pilot signal off too	98 MHz	R - 19	19.00 KHz + / - 50 Hz

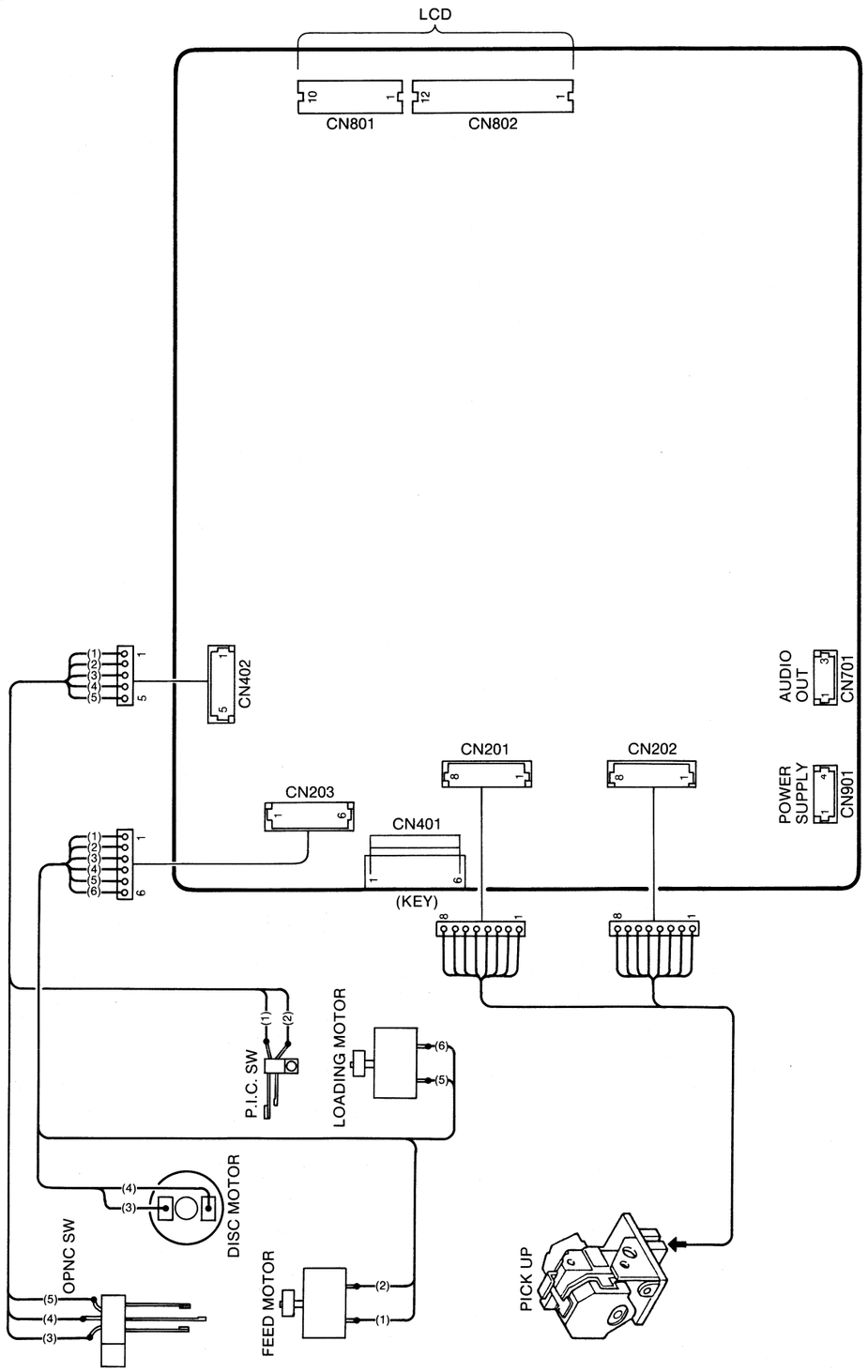
Abgleichanweisung Cassette Queens 160
Alignment procedure cassette Queens 160

TAPE POSITION Recorderstellung	TEST TAPE Testcassette	MEASURING INSTRUMENT Meßgerät	TESTPOINT Meßpunkt	ADJUSTMENT LOCATION Abgleichpunkt	MEASURING SIGNAL Meßsignal
1. Head azimuth/A/W-Kopf-Einstellung					
PLAYBACK	MTT-114 N 10 kHz	V.T.V.M AC-Millivoltmeter	OUT L CH OUT R CH	AZIMUTH SCREW	NF-max.
2. Tape speed/Geschwindigkeit					
PLAYBACK LOW	MTT- 111 N 3000 Hz	FREQUENCY COUNTER	OUT L/R CH	R 464	3000 Hz
PLAYBACK HIGH	MTT-111 N 3000 Hz	Frequenz-zähler	OUT L/R CH	R 462	4800 Hz
3. Oscillator coil frequency/Oszillatorfrequenz					
RECORD	AC-212 IEC-I	FREQUENCY COUNTER Frequenzzähler	ERASE HEAD Löschkopf	L 403	85 kHz +/–5 kHz

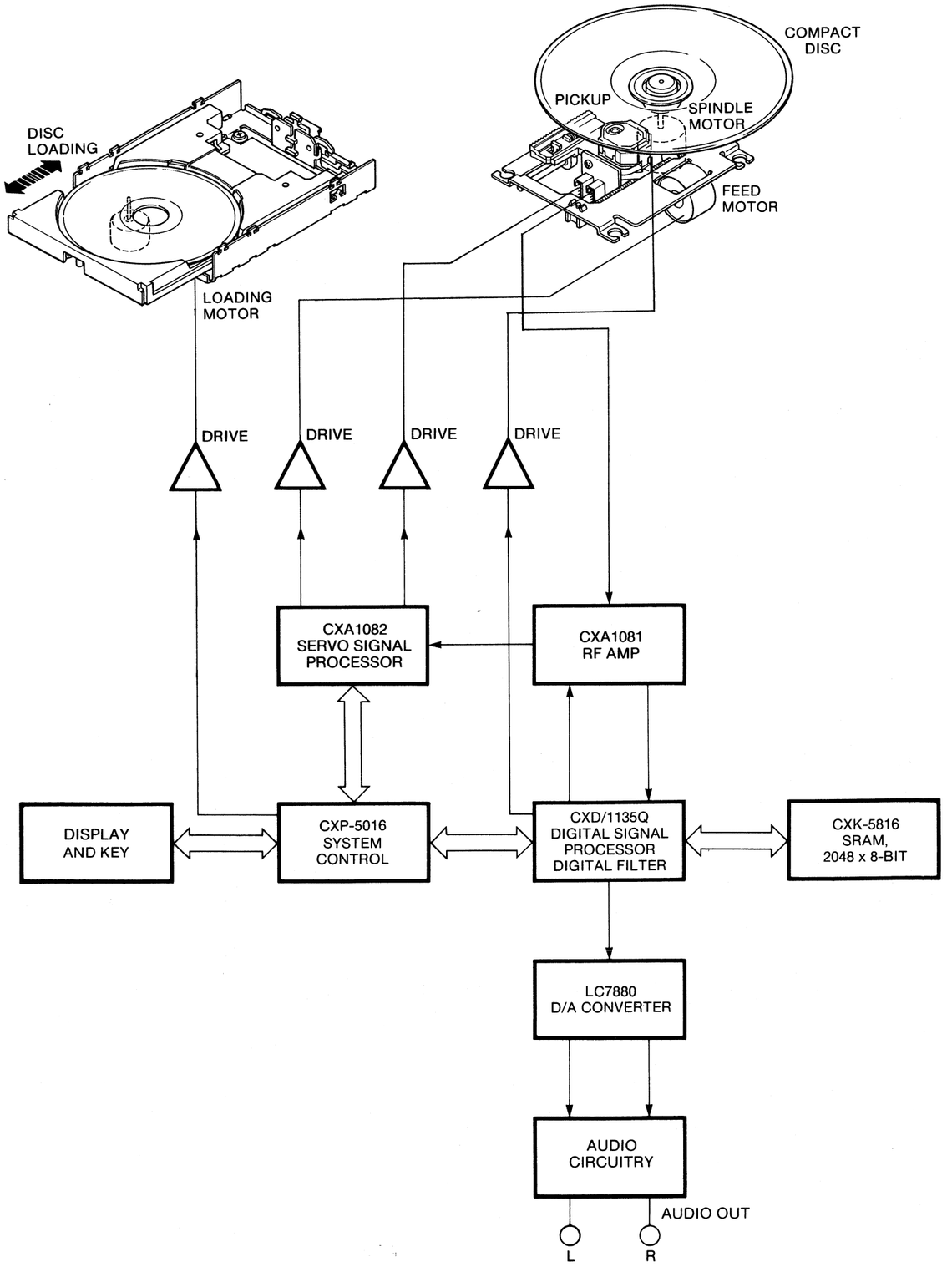
Löschspannung: ca. 100 Vss

Vormagnetisierung: ca. 34 Vss

Verdrahtungsplan CD-Player Queens 160/
Wiring diagram CD player Queens 160/Queens 2

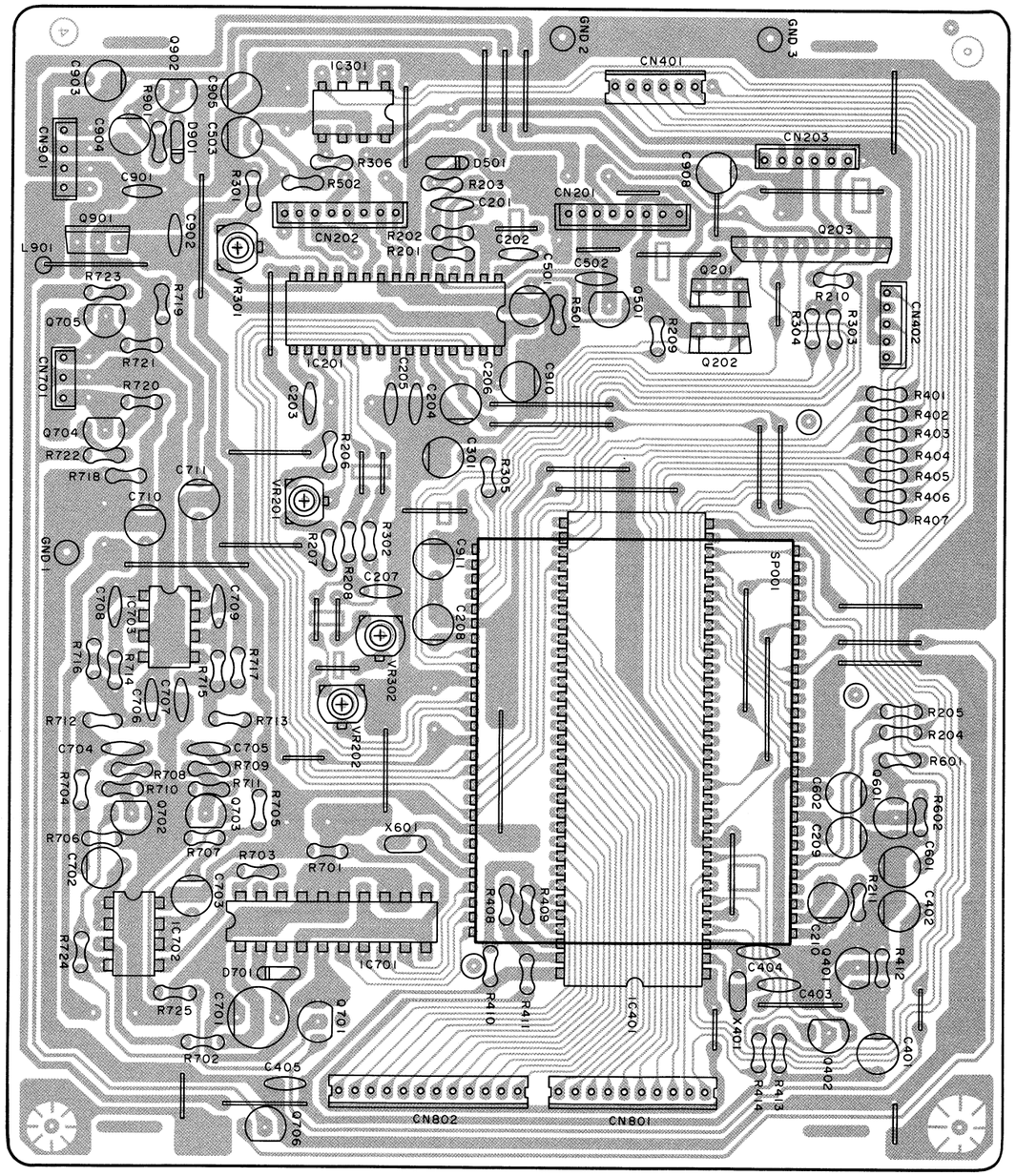


Blockdiagramm CD-Player Queens 160/
Block diagram CD player Queens 160/

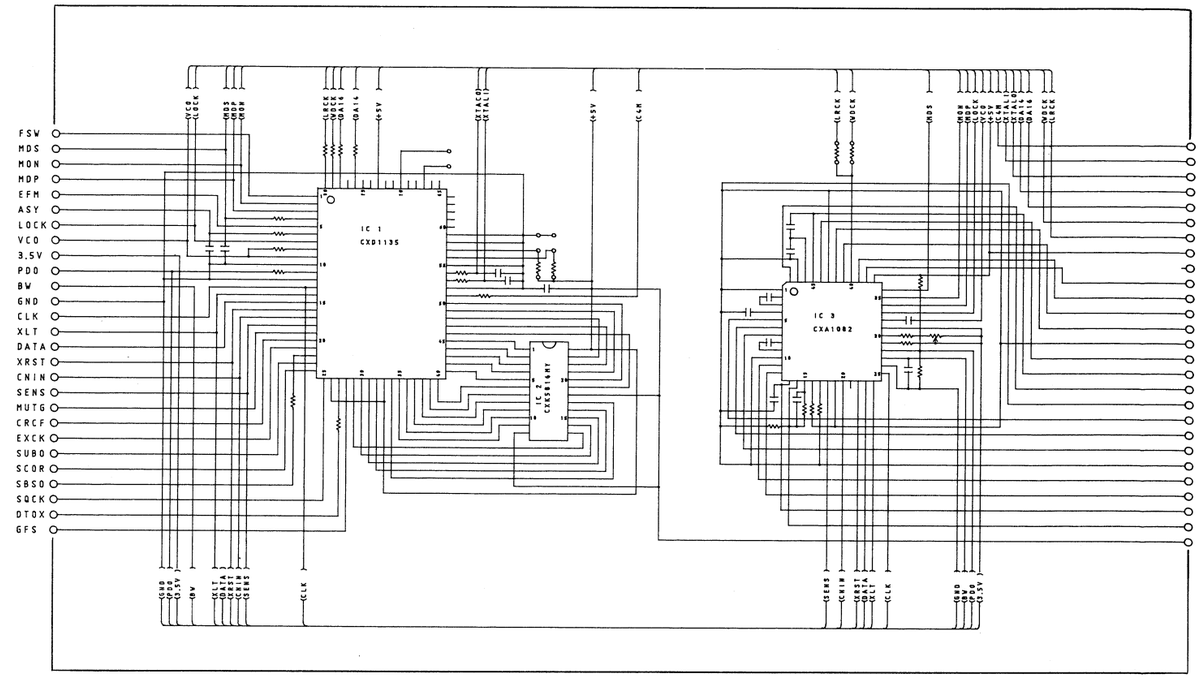


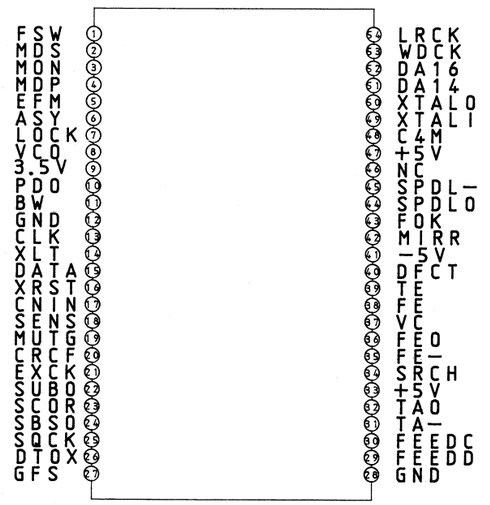
CD-Platine
CD P.C.B.

Bestückungsseite
Top view

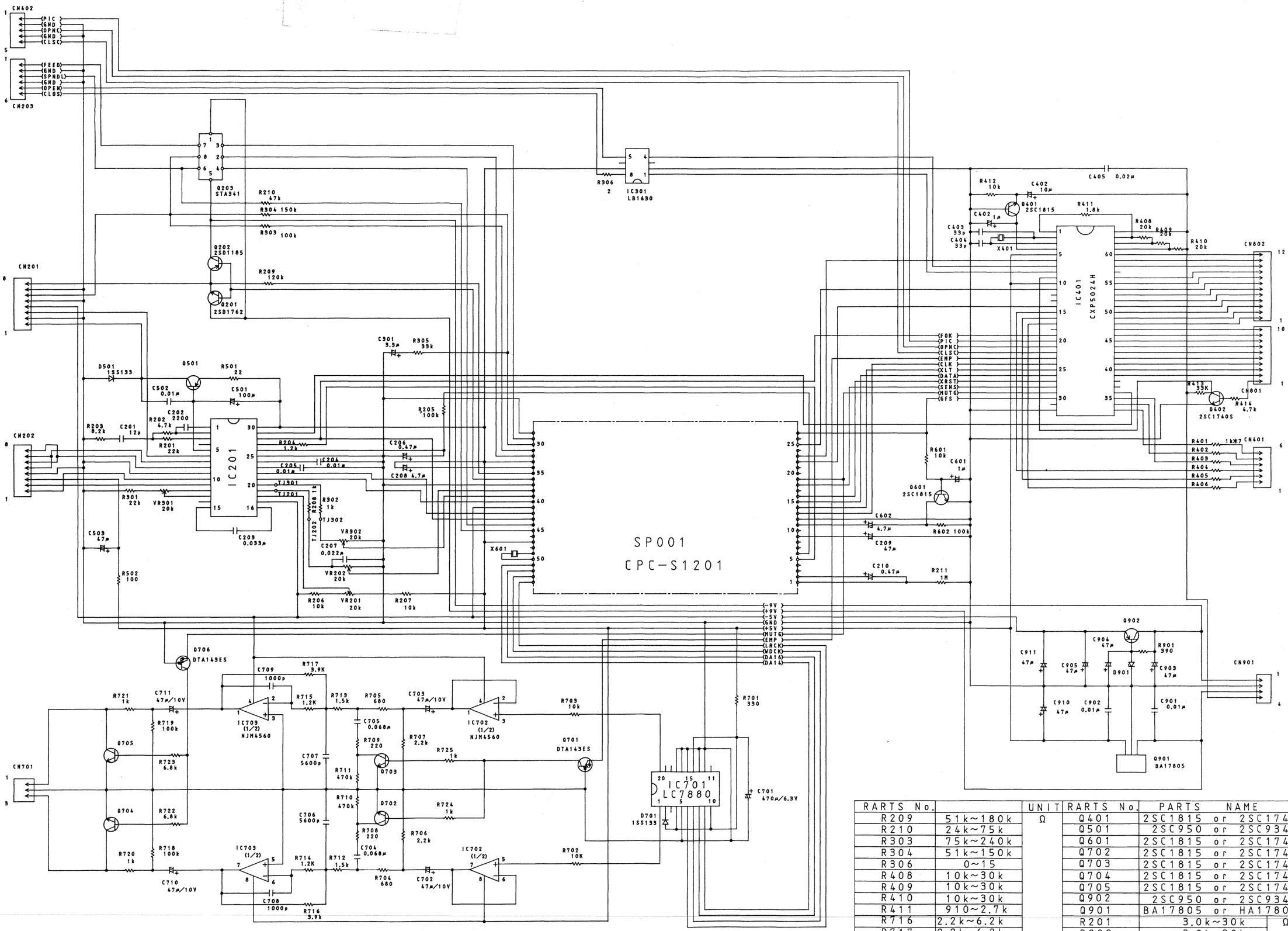


Schaltbild IC-Zusatzplatine SP001 CPC-S2101 zu CD-Player
Circuit diagram Sub P.C.B. SP001 CPC-S2101 for CD player



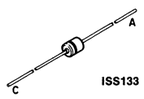


Schaltbild CD-Player Queens 160/
Circuit diagram CD player Queens 160/

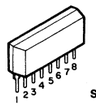


RARTS No.		UNIT	RARTS No.	PARTS NAME
R209	51k~180k	Ω	Q401	2SC1815 or 2SC1740
R210	24k~75k		Q501	2SC950 or 2SC934
R303	75k~240k		Q601	2SC1815 or 2SC1740
R304	51k~150k		Q702	2SC1815 or 2SC1740
R306	0~15		Q703	2SC1815 or 2SC1740
R408	10k~30k		Q704	2SC1815 or 2SC1740
R409	10k~30k		Q705	2SC1815 or 2SC1740
R410	10k~30k		Q902	2SC950 or 2SC934
R411	910~2.7k		Q901	BA17805 or HA17805
R716	2.2k~6.2k		R201	3.0k~30k Ω
R717	2.2k~6.2k		R202	3.0k~30k

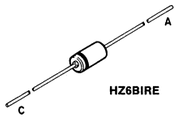
IC- und Transistor-Blockschaltbilder für CD-Player
IC and transistor block diagrams for CD player



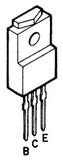
ISS133 D501, 701



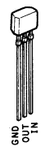
STA341M Q203



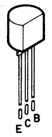
HZ6BIRE D901



2SD1762 Q201
2SB1185 Q202

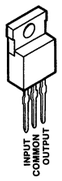


DTA143ES Q701, 706



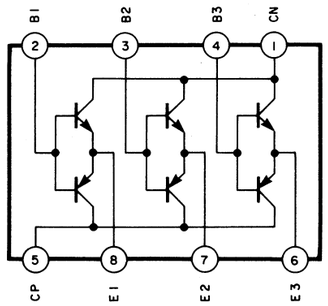
2SA950 Q501, 902

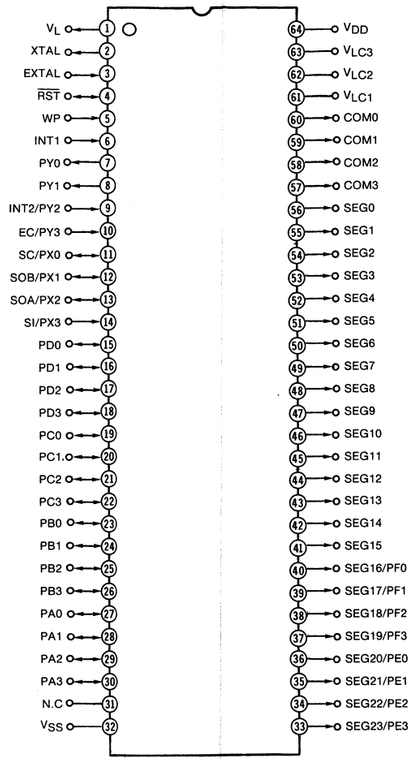
2SC1740 Q401, 402, 601, 702
Q703, 704, 705



BA17805 Q901

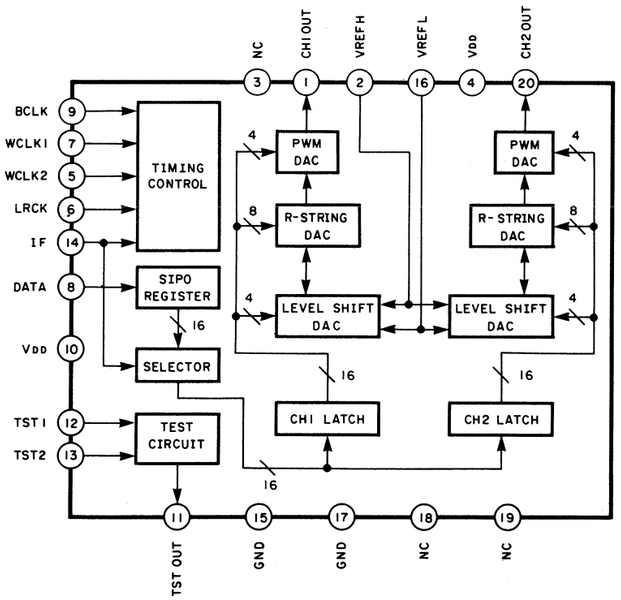
Q203 STA341M

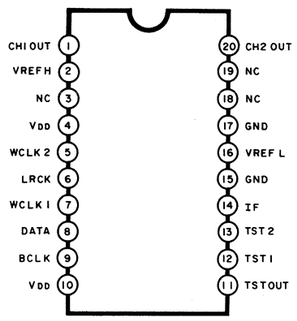


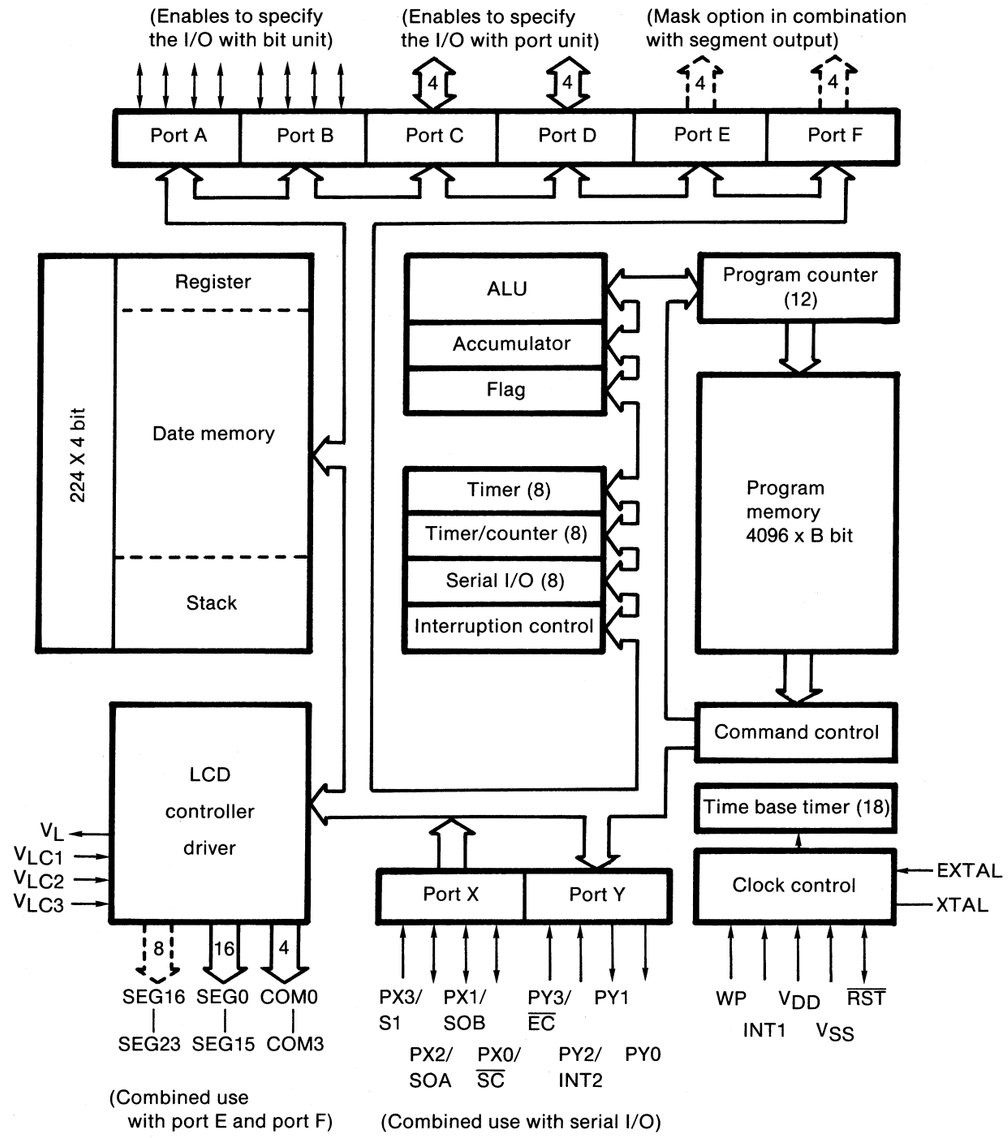


IC401 CXP5024H

IC 701 LC7880

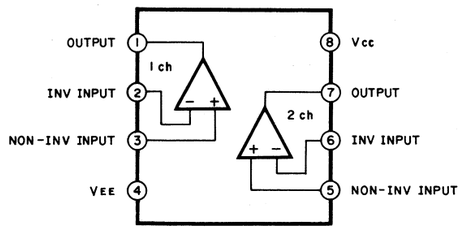


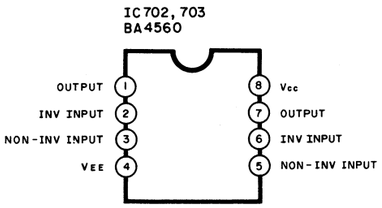




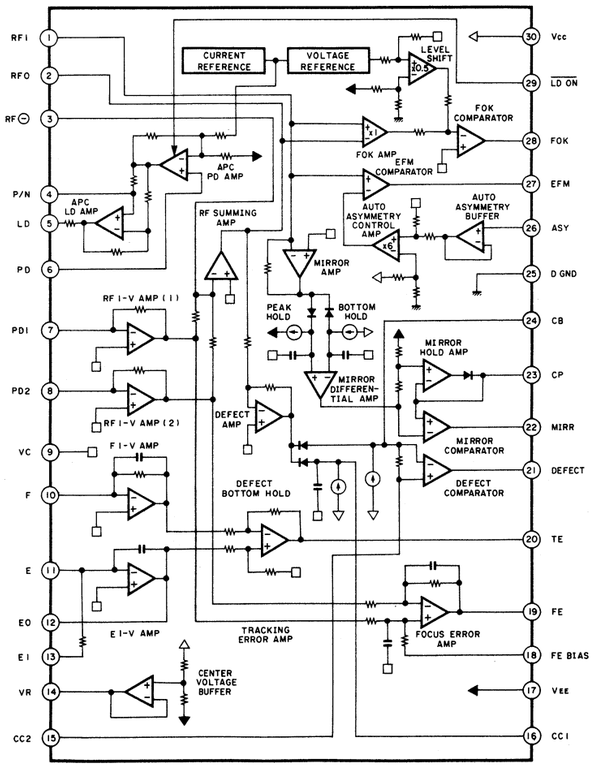
IC401 CXP5024H

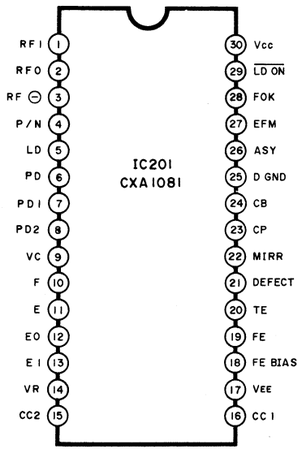
IC 702, 703
BA4560

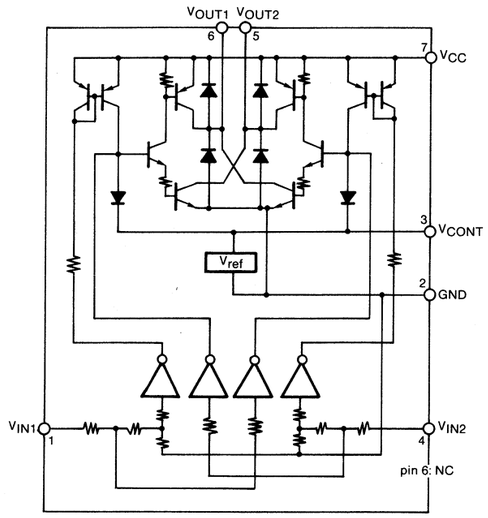




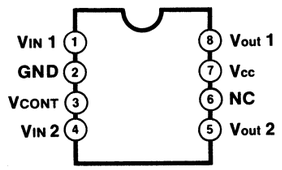
IC 201 CXA1081







IC301 LB1630



IC- und Transistor-Spannungstabellen für CD-Player

IC and transistor voltage charts for CD player

Pin No. DC	E	C	B
Q201	0.0	9.0	0.6
Q202	0.0	-9.0	0.6
Q401	0.0	5.4	0.0
Q501	5.0	1.3	4.7
Q601	0.0	0.0	0.0
Q702	0.0	0.0	-0.4
Q703	0.0	0.0	-0.4
Q704	0.0	0.0	0.7
Q705	0.0	0.0	0.7
Q902	-5.0	-9.0	-5.7

Pin No. DC	IN	GND	OUT
Q701	0.0	-0.3	0.0
Q706	4.4	4.4	0.0
Q901	9.0	0.0	5.0

Q203

Pin No.	1	2	3	4	5	6	7	8
DC	9.0	0.2	0.0	-0.5	-9.0	0.0	0.0	0.0

IC201

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
DC	0.0	0.0	0.0	4.3	4.4	-5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-1.1
Pin No.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
DC	1.1	-5.0	0.1	0.1	0.0	-4.3	0.0	-3.3	0.0	0.0	2.5	2.4	0.3	5.0	5.0

IC301

Pin No.	1	2	3	4	5	6	7	8
DC	0.0	0.0	0.0	4.3	4.4	-5.0	0.0	0.0

IC401

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
DC	0.0	2.2	2.3	5.4	5.0	0.0	4.2	4.2	5.0	5.0	0.5	0.5	0.5	0.0	5.0
Pin No.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
DC	5.0	5.0	5.0	0.3	5.0	5.0	0.0	0.0	5.0	5.0	0.0	5.0	0.1	4.4	0.0
Pin No.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
DC	0.0	0.0	5.0	5.0	5.0	5.0	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Pin No.	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
DC	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Pin No.	61	62	63	64											
DC	3.4	1.8	0.2	5.0											

IC701

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
DC	1.9	3.8	0.0	4.4	0.0	2.5	2.5	0.0	2.4	4.4	0.4	0.0	0.0	4.4	0.0
Pin No.	16	17	18	19	20										
DC	0.0	0.0	0.0	0.0	1.9										

IC702

Pin No.	1	2	3	4	5	6	7	8
DC	1.9	1.9	1.9	-5.0	1.9	1.9	1.9	5.0

IC703

Pin No.	1	2	3	4	5	6	7	8
DC	0.0	0.0	0.0	-5.0	0.0	0.0	0.0	5.0

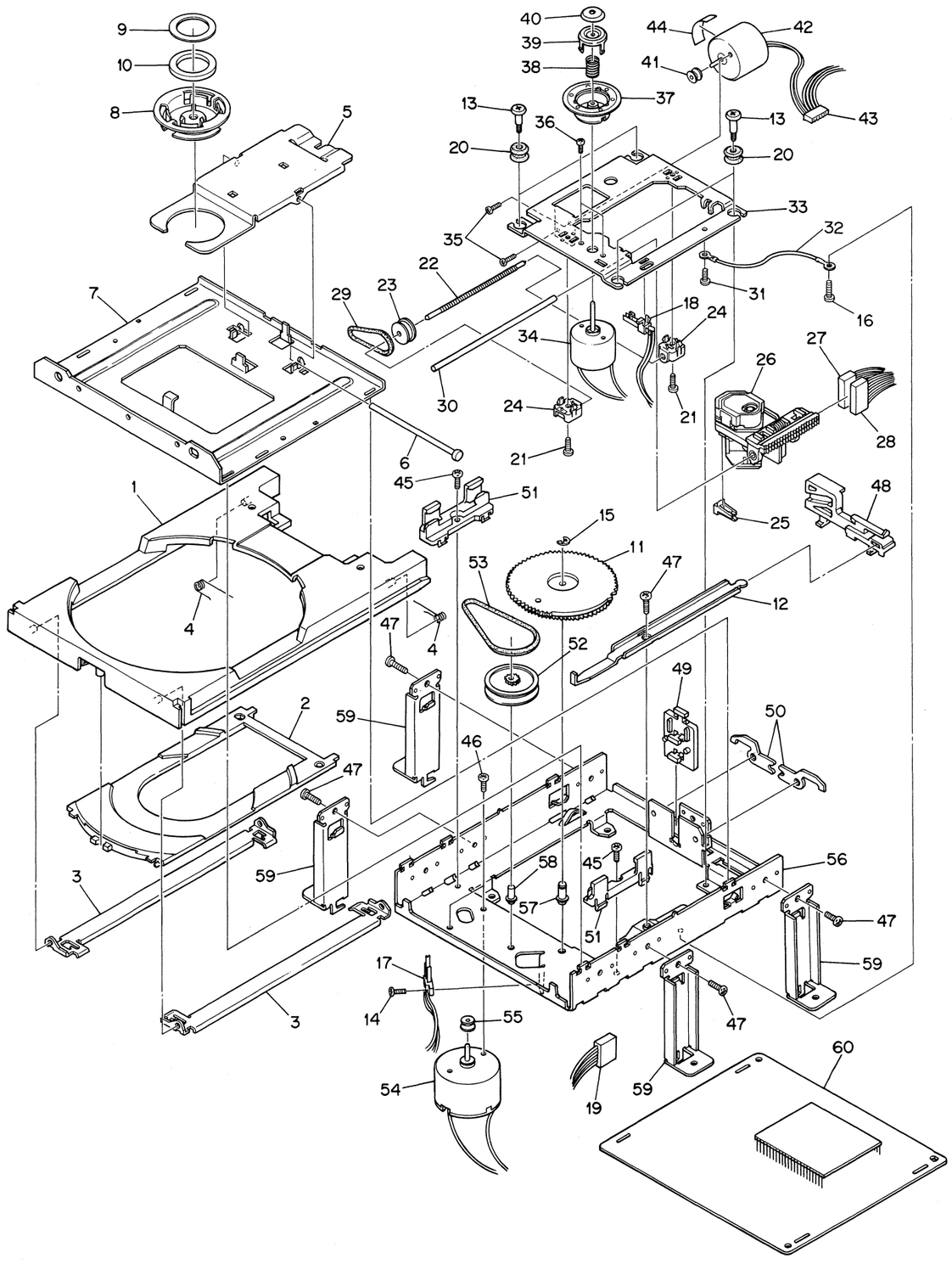
SP001

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
DC	0.0	0.0	0.0	0.0	2.4	2.5	0.0	3.5	3.5	2.7	2.7	0.0	5.0	5.0	0.0
Pin No.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
DC	5.0	5.0	0.1	4.4	0.0	0.4	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
Pin No.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
DC	0.0	0.3	5.0	0.5	0.0	0.6	0.0	0.1	0.0	-4.3	-5.0	0.0	0.3	-0.5	0.0
Pin No.	46	47	48	49	50	51	52	53	54						
DC	5.0	5.0	0.0	2.4	2.5	2.4	0.0	2.5	2.5						

Ersatzteilliste CD-Player
Spare parts list CD player

Bestell-Nr./ Part. No.	Bezeichnung	Description	Position	Preisgruppe/ Price key
Elektrische Teile/Electrical parts				
46 819 00	CD-Spieler kpl.	CD player assembly	A 22	G 2
46 876 00	CD-Platine	CD P.C.B.	CM 60	F 9
46 877 00	IC-Zusatzplatine J019	IC P.C.B. J019	J019	E 5
46 747 00	IC CXA 1081 S RF Amplifier	IC CXA 1081 S RF Amplifier	IC 201	B 4
46 748 00	IC LB 1630 Motor Driver	IC LB 1630 motor driver	IC 301	B 3
46 878 00	IC CXP 5024 H-076S	IC CXP 5024H-076S	IC 401	D 5
46 501 00	IC LC 7880 = LC 7881	IC LC 7880 = LC 7881	IC 701	B 9
40 765 00	IC BA 4560 o. UPC 4560	IC BA 4560 o. UPC 4560	IC 702/703	A 6
40 767 00	Transistor 2 SD 1762 E	Transistor 2 SD 1762 E	Q 201	A 7
40 766 00	Transistor 2 SB 1185 E	Transistor 2 SB 1185 E	Q 202	A 8
40 768 00	Transistor STA 341 M	Transistor STA 341 M	Q 203	B 4
34 692 00	Transistor 2 SC 1740	Transistor 2 SC 1740	Diverse	A 2
46 752 00	Transistor 2 SA 950 Y	Transistor 2 SA 950 Y	Q 501/902	A 5
40 368 00	Transistor DTA 143 XS	Transistor DTA 143 XS	Q 701/706	A 2
46 751 00	Transistor HA 17805	Transistor HA 17805	Q 901	A 8
24 750 00	Diode 1 SS 133	Diode 1 SS 133	D 501/701	A 2
46 879 00	Zenerdiode HZ 6B1 RE	Zenerdiode HZ 6B1 RE	D 901	A 3
29 622 00	Trimmpoti 20 kOhm	Semi-fixed resistor 20 kOhm	Diverse	A 3
40 769 00	Quarz XTP0334-16934K015 16,9344 MHz	Crystal XTP0334-16934K015 16.9344 MHz	X 601	B 2
46 839 00	Keramik-Oszillator CSA 4,00 MHz	Ceramic resonator CSA 4.00 MHz	X 401	A 7
Mechanische Teile/Mechanical parts				
46 755 00	Schlitten CD-Platte	Tray	DM 1	B 4
46 756 00	Auflagebügel CD-Platte	Lifter	DM 2	B 0
46 869 00	Feder Auflagebügel	Spring lifter	DM 4	A 2
46 757 00	Zentrierscheibe oben	Disk cramper	DM 8	A 3
46 758 00	Kurvenzahnrad Lademechanik	Drive gear	DM 11	A 9
34 315 00	Sicherungsring für Kurvenzahnrad	E-Ring spring	DM 15	A 0
46 759 00	Schaltkontakt	LSC-1223-31 Leaf SW	DM 17	A 9
44 132 00	Mikroschalter MSW L 541 T	Leaf switch MSW L 541 T	DM 18	A 4
46 870 00	Gewindestange Laserschlitten	Lead screw laser	DM 22	B 1
44 121 00	Pulley Gewindestange	Pulley feed	DM 23	A 2
46 871 00	Führungsrolle Gewindestange	S-rack lead screw	DM 25	A 3
46 760 00	Laserabtaster kpl.	Laser pick up	DM 26	F 1
44 116 00	Riemen Lasermotor	Belt laser motor	DM 29	A 3
44 124 00	Gleitstange	Guide shaft	DM 30	A 4
46 761 00	Motor Antrieb CD-Platte	Disk motor	DM 34	C 0
46 762 00	Antriebsteller	Disk table	DM 37	B 0
46 872 00	Feder Antriebsteller	Locater spring	DM 38	A 1
46 763 00	Zentrierscheibe unten	Locater	DM 39	A 3
46 873 00	Kappe Zentrierscheibe	Locater cup	DM 40	A 3
44 115 00	Motorpulley Laser	Motorpulley laser	DM 41	A 1
44 117 00	Motor Laser	Motor laser	DM 42	B 6
46 874 00	Gleithebel Kippmechanik	Slide lever cam	DM 48	A 7
46 875 00	Druckhebel Kippmechanik	Lever push	DM 49	A 5
46 764 00	Zwischenrad/Lademechanik	Idle gear C	DM 52	A 3
46 765 00	Riemen Lademotor	Belt	DM 53	A 4
40 752 00	Motor Schlitten	Motor tray	DM 54	B 9
46 766 00	Pully Lademotor	Motor pulley	DM 55	A 2

Explosionsdarstellung CD-Mechanik Queens 160/Queens 200
Exploded view CD mechanism
Explo-Index: CD



Abgleichanweisung CD-Spieler

Benötigte Meßgeräte: Frequenzzähler
Test-CD
Oszilloskop

VCO-Frequenzabgleich

Dieser Abgleich kann ohne CD-Platte durchgeführt werden.

1. Frequenzzähler an Testpunkt VCO und Masse anschließen.
2. Pin 6 der IC-Zusatzplatine mit Masse TJ 901 verbinden.
3. Gerät einschalten.
4. Mit Poti VR auf der IC-Zusatzplatine Frequenz auf 4,3218 ±0,01 MHz abgleichen.
5. Kurzschlußbrücke an Pin 6 der IC-Zusatzplatine wieder entfernen.

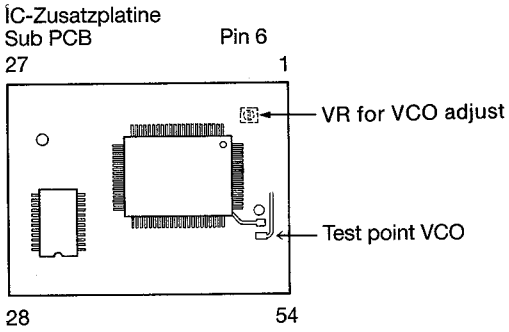
Alignment procedure CD player

Instruments required: Frequency counter
Test disc
Oscilloscope

VCO frequency adjustment

This VCO frequency adjustment does not need a CD disc.

1. Connect the frequency counter to test point (VCO) and to ground (TJ 901).
2. Connect the Sub P.C.B. 6th pin to GND wire.
3. Set the unit power on.
4. Adjust VR in Sub P.C.B. the frequency to 4.3218 ±0.01 MHz.
5. Resolder (Pin 6 in Sub P.C.B. and GND).

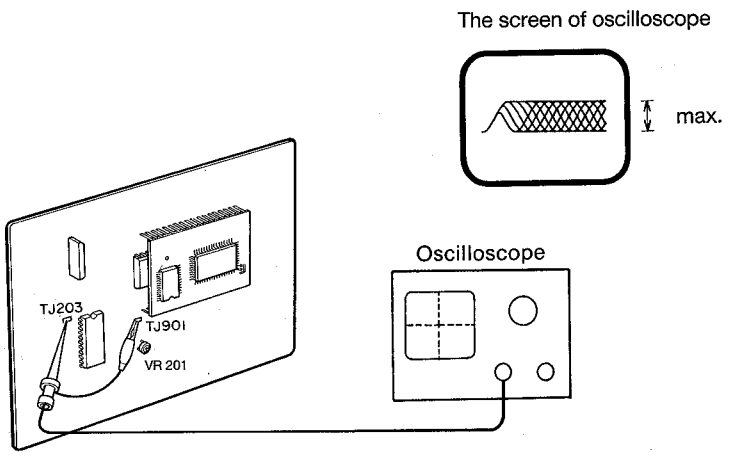


EF-Balance und Focus-Offset-Abgleich

1. CD-Platte einlegen und »PLAY«-Taste drücken.
2. Oszilloskop an Testpunkt TJ 203 und Masse TJ 901 anschließen.
3. HF-Signal mit VR 201 und VR 301 auf Maximum abgleichen.

EF-Balance and Focus-Offset adjustment

1. Load a disc and play back.
2. Connect an oscilloscope to the test points TJ 203 and ground (TJ 901).
3. Adjust VR 201 and VR 301 so that the HF-Signal becomes maximum.



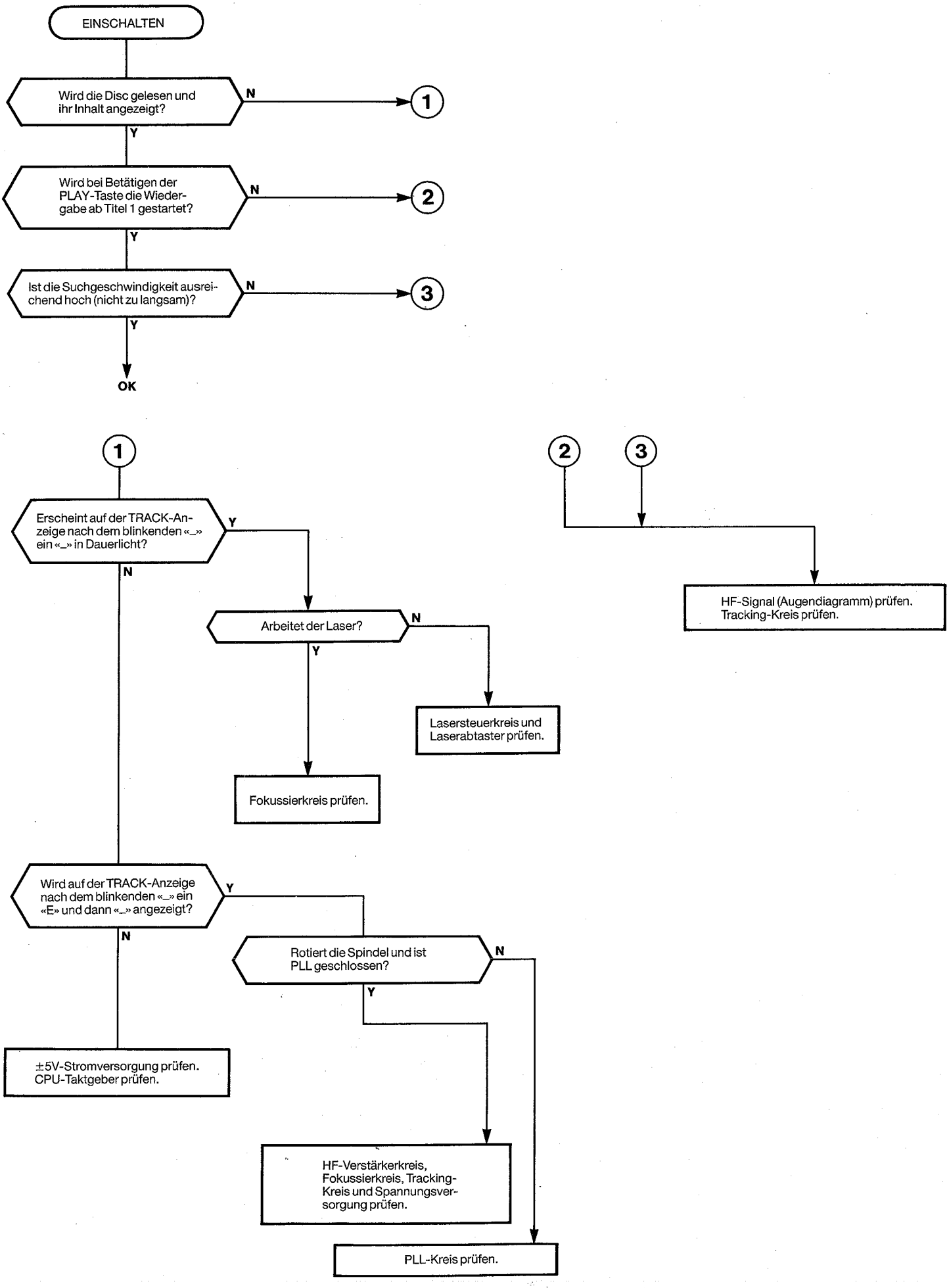
Fokus-Servo-Verstärkung

(Einstellung von Fokus- und Spurführungsverstärkung)
Für genauen Abgleich ist ein Servo-Analysator erforderlich. Jedoch besteht bei Normalbetrieb auch dann keine Schwierigkeit, wenn eine geringe Abweichung von den zulässigen Werten auftritt, da die Verstärkung in einem gewissen Bereich variieren kann. Deswegen sollte dieser Abgleich nicht ausgeführt werden. Mit der Fokus- und Spurführungsverstärkung werden Nachführeigenschaften des Abtasters bei mechanischen Erschütterungen und Stößen während des Betriebs beeinflußt.

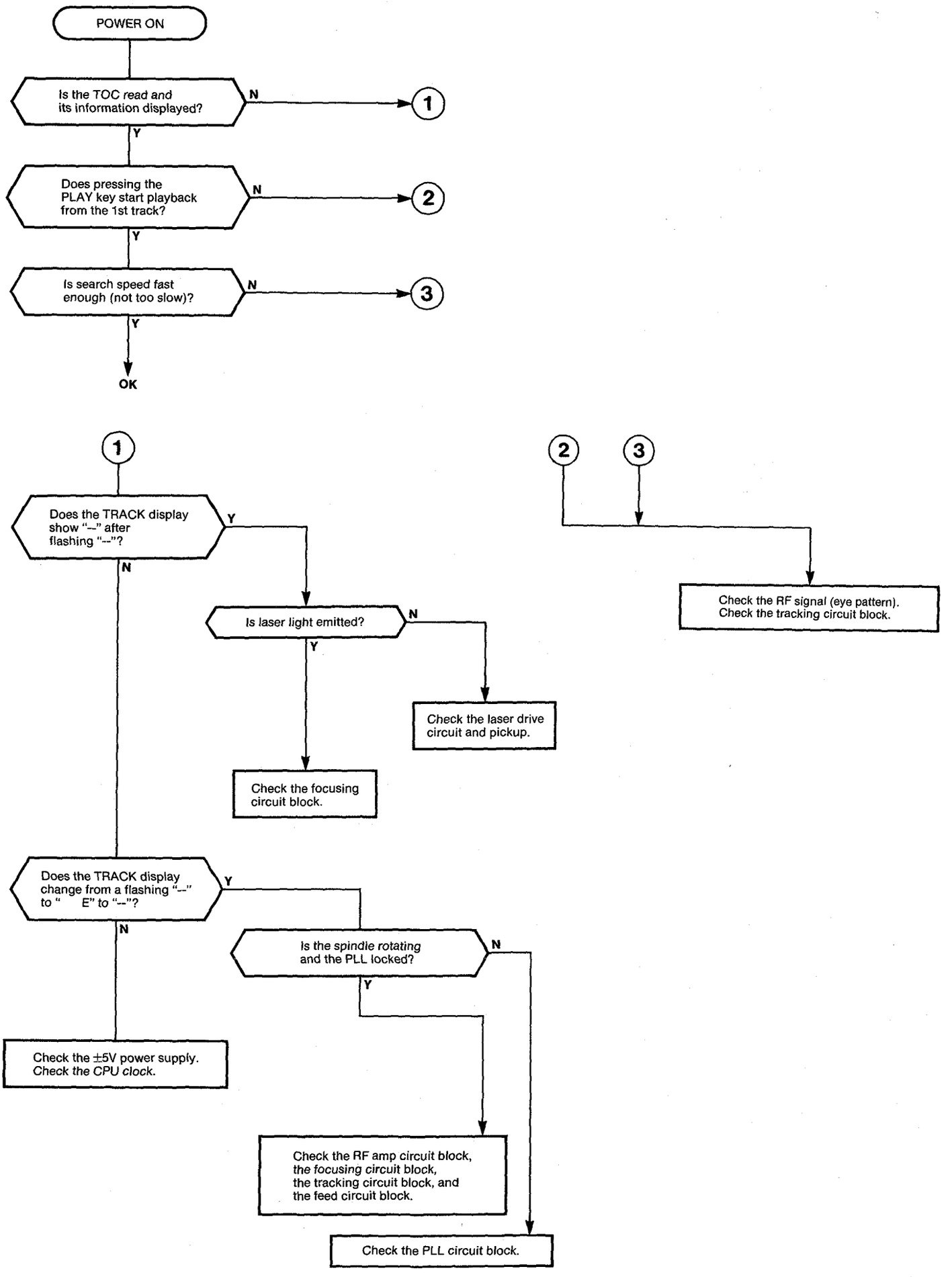
Focus servo gain adjustment

(Focus/Tracking-Gain adjustment)
A servo-analyzer is required for accurate adjustment.
However, there will be no problem in normal operation even in case of a minor drift from precise adjustment because the gain has an allowable margin.
Therefore, do not apply this adjustment.
The Focus/Tracking-gain determines the tracking property of the pickup against the mechanical noise and mechanical shock during the operation.

Fehlersuchdiagramm CD-Player



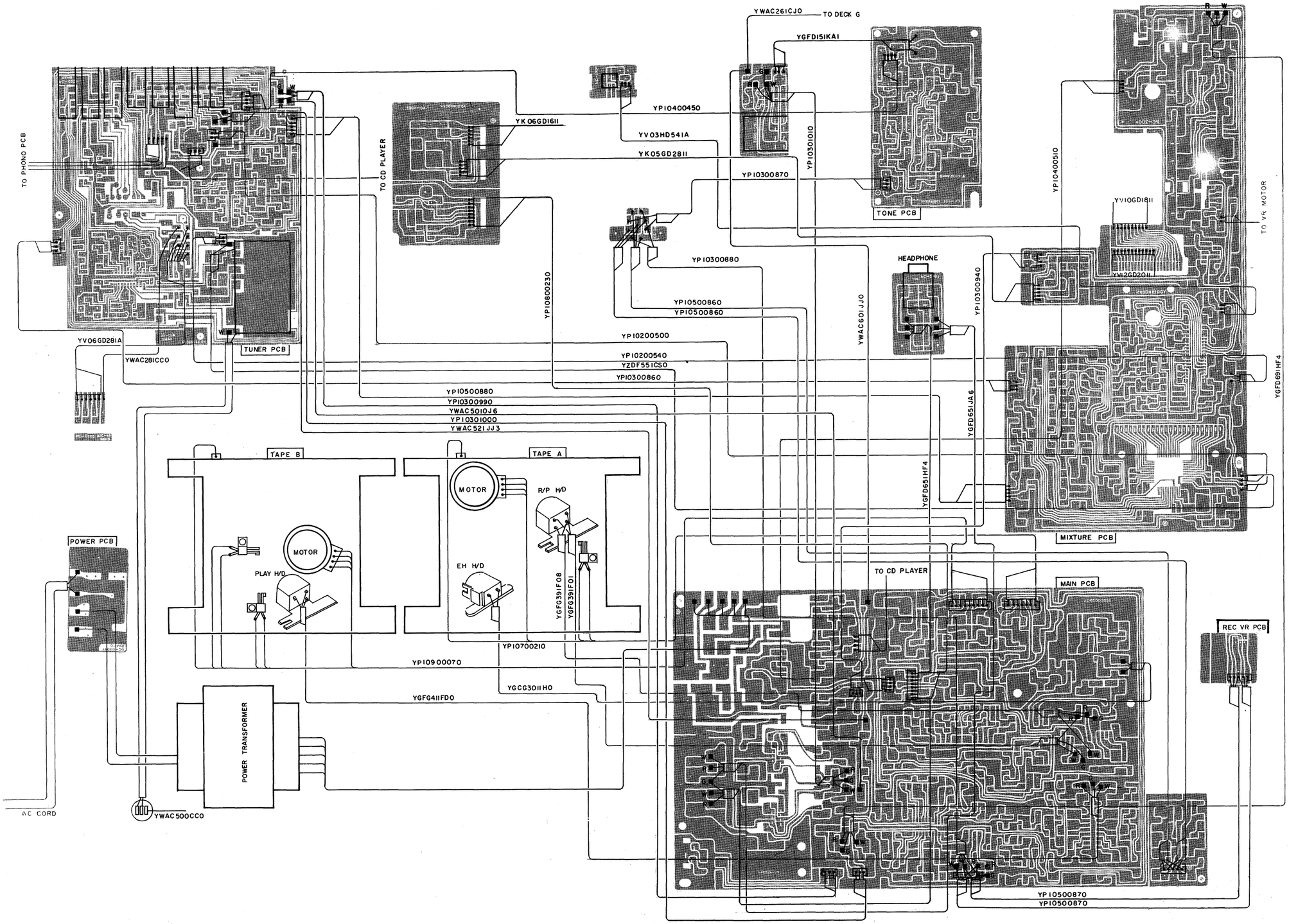
Troubleshooting Flowchart CD player



Ersatzteilliste elektrisch Queens 200 (ohne CD)
Spare parts list electrical Queens 200 (without CD player)

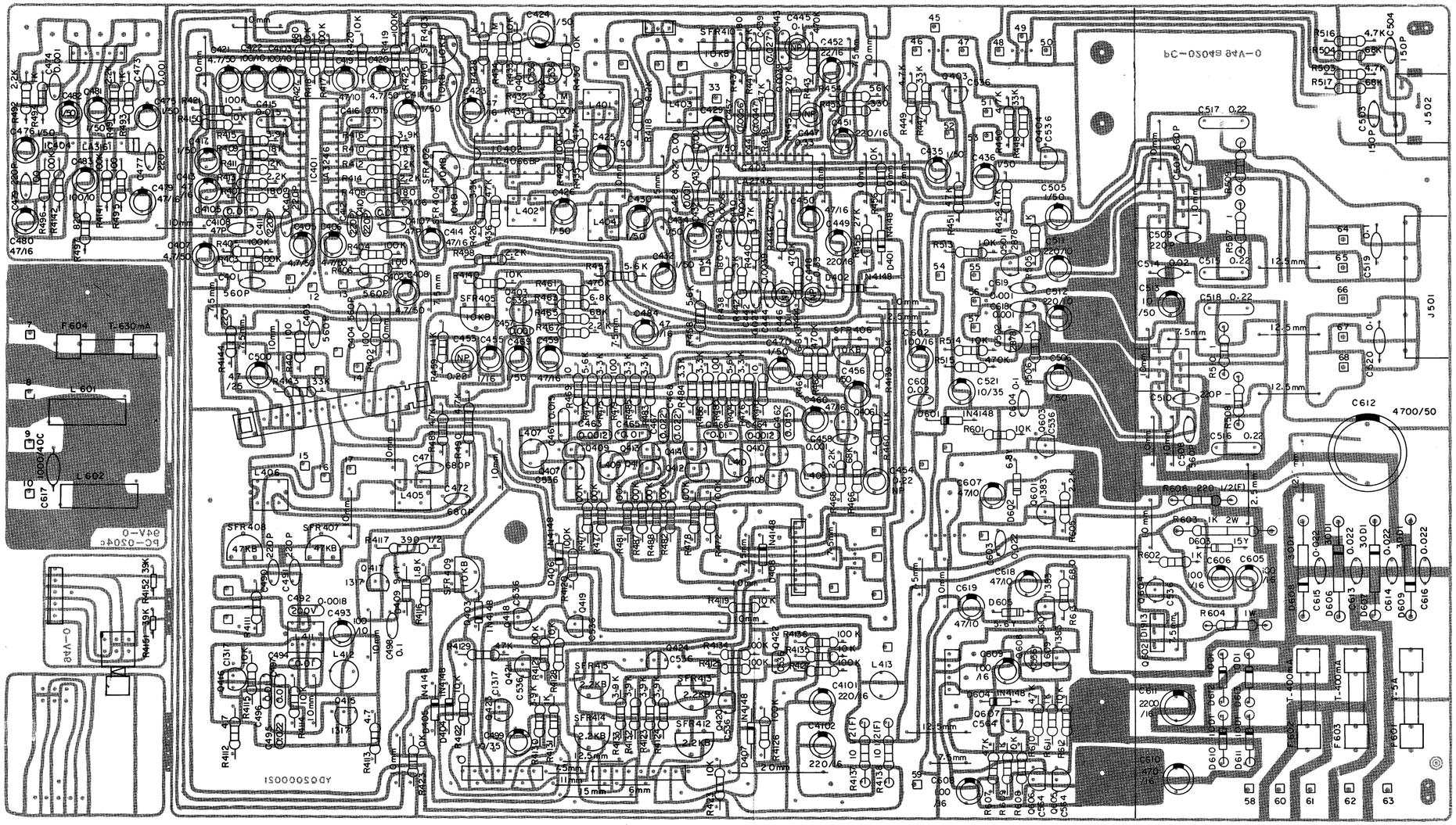
Bestell-Nr./ Part. No.	Bezeichnung	Description	Position	Preisgruppe/ Price key
48 009 00	Tunerplatine	Tuner P.C.B.		F 3
48 010 00	Hauptplatine	Main P.C.B.		F 7
48 011 00	Displayplatine	Display P.C.B.		F 8
48 013 00	Klangreglerplatine	Tone P.C.B.		C 9
48 012 00	Schalterplatine CD Tape	Control P.C.B. CD Tape		C 8
46 850 00	Phono-Vorverstärker-Platine	Pre-amplifier phono		C 3
48 002 00	IC LA 1265	IC LA 1265	IC 1	B 7
13 558 00	IC LB 1416	IC LB 1416	IC 405	B 5
46 829 00	IC LB 1641	IC LB 1641	IC 303	B 2
31 481 00	IC UPD 1708 AG-728-00	IC UPD 1708 AG-728-00	IC 201	D 2
38 286 00	IC TDA 2025	IC TDA 2025	IC 501/502	B 7
32 997 00	IC LA 3161	IC LA 3161	IC 404/901	B 0
37 730 00	IC LA 2746	IC LA 2746	IC 403	C 3
40 799 00	IC LA 3246	IC LA 3246	IC 401	B 2
21 596 00	IC LA 3361	IC LA 3361	IC 2	B 1
26 131 00	IC TC 4013 BP	IC TC 4013 BP	IC 302	A 8
32 998 00	IC TC 4066 BP	IC TC 4066 BP	IC 402	B 0
46 830 00	IC LC 6546C – 4059	IC LC 6546C – 4059	IC 301	C 4
21 736 00	Transistor 2 SC 1815 GR	Transistor 2 SC 1815 GR	Diverse	A 3
12 036 00	Transistor 2 SA 564 Q	Transistor 2 SA 564 Q	Diverse	A 8
37 957 00	Transistor 2 SA 1177 E	Transistor 2 SA 1177 E	Q 1	A 3
13 545 00	Transistor 2 SC 536 NP-F	Transistor 2 SC 536 NP-F	Diverse	A 3
08 012 00	Transistor 2 SC 1317	Transistor 2 SC 1317	Diverse	A 5
03713 00	Transistor 2 SC 1383 Q	Transistor 2 SC 1383 Q	Q 601/609	A 7
24 533 00	Transistor 2 SC 2634 S	Transistor 2 SC 2634 S	Diverse	A 3
44 096 00	Transistor 2 SB 544 E/F	Transistor 2 SB 544 E/F	Q 605	A 5
34 691 00	Transistor 2 SC 2878	Transistor 2 SC 2878	Q 501/502	A 3
44 764 00	Transistor 2 SD 1913 R	Transistor 2 SD 1913 R	Q 602	A 1
11 241 00	Diode 1 N 4148	Diode 1 N 4148	Diverse	A 2
40 288 00	Diode KV 1236 Z 2	Diode KV 1236 Z 2	D 1	B 7
12 039 00	Diode 10 D 1 SIL.	Diode 10 D 1 SIL.	Diverse	A 4
26 552 00	Diode 30 D-1 FC	Diode 30 D-1 FC	D 604-607	A 4
23 214 00	Zenerdiode GZA 9,1 Y	Zenerdiode GZA 9.1 Y	D 409	A 1
21 413 00	Zenerdiode GZA 15 Z	Zenerdiode GZA 15 Z	D 603	A 2
21 350 00	Zenerdiode GZA 6,2 X oder Y	Zenerdiode GZA 6.2 X or Y	D 207/304	A 3
21 745 00	Zenerdiode GZA 6,8 Y	Zenerdiode GZA 6.8 Y	D 602	A 3
21 352 00	Zenerdiode GZA 5,6 Y	Zenerdiode GZA 5.6 Y	D 605	A 3
29 597 00	Leuchtdiode SLR-34VR5 (rot)	LED SLR-34VR5 (red)	X 402/410	A 4
32 768 00	Leuchtdiode SLR-34 DU5 (orange)	LED SLR-34 DU5 (orange)	X 403-409	A 4
37 414 00	Leuchtdiode SEL 2310 S GN (grün)	LED SEL 2310 S GN (green)	X 401	A 2
12 110 00	Filter-Keramik 10.7-B	Ceramic Filter 10.7-B	F 1, 2	A 6
48 003 00	Filter-Keramik BFU 455 CN 4	Ceramic Filter BFU 455 CN 4	F 4	A 8
46 831 00	Ferritantenne LW/MW	Bar antenna coil LW/MW	L 2	B 4
37 784 00	Spule 100 µH	Coil 100 µH	L 412/413	A 4
37 783 00	Spule 3,9 mH	Coil 3.9 mH	L 409/410	A 4
37 782 00	Spule 6,8 mH	Coil 6.8 mH	L 407/408	A 4
34 320 00	Drossel 100 µH	Choke coil 100 µH	L 1, 5	A 3
45 992 00	Keramik-Filter SFZ 455	AM Ceramic Filter	F 3	B 0
24 372 00	Spule AM	Filter Coil	L 6	A 6
34 322 00	Spule AM	AM IFT Coil	IF 2	A 4
34 324 00	Spule Netzleitung	Air Coil	L 601/602	A 1
40 291 00	Spule MW-Oszillator LB 0541	MW oscillator coil	L 4	A 3
48 004 00	Spule, Löschoszillator	Tape oscillator coil	L 411	A 7
45 991 00	Spule LW-Oszillator	LW oscillator coil	L 3	A 4
48 005 00	Oszillator	Oscillator coil	L 401-406	A 7
40 295 00	Filter MPX	Filter MPX	L 7/8	B 0
31 482 00	Quarz 4,5 MHz	X'tal 4.5 MHz	X 201	A 8
46 839 00	Keramik-Oszillator CSA 4,00 MHz	Ceramic resonator CSA 4.00 MHz	X 301	A 7
46 834 00	Drehwiderstand 100k Balance	Rotary VR 100k Balance	VR 803	B 1
46 835 00	Drehwiderstand 100k Klang	Rotary VR 100k Tone	VR 801/802	B 2
46 836 00	Motor-Drehwiderstand 100k Volumen	Rotary VR with motor 100k Volume	VR 501	D 0
48 006 00	Drehwiderstand 10k Aussteuerung	Rotary VR 10k record level	VR 401	C 0
37 022 00	Trimmpoti 1k	Semi-fixed resistor 1k	SFR 4	A 4
37 444 00	Trimmpoti 2,2k	Semi-fixed resistor 2.2k	Diverse	A 3
37 443 00	Trimmpoti 10k	Semi-fixed resistor 10k	Diverse	A 3
32 587 00	Trimmpoti 22k	Semi-fixed resistor 22k	SFR 1	A 4
37 441 00	Trimmpoti 4,7k	Semi-fixed resistor 4.7k	SFR 411	A 3
34 538 00	Trimmpoti 47k	Semi-fixed resistor 47k	SFR 2	A 2
18 576 00	Sicherungswiderstand 1 Ohm/¼ W	Fuse resistor 1 Ohm/¼ W	R 507-510	A 2
46 479 00	Sicherungswiderstand 10 Ohm/½ W	Fuse resistor 10 Ohm/½ W	R 4137/4138	A 1
32 072 00	Sicherungswiderstand 22 Ohm/½ W	Fuse resistor 22 Ohm/½ W	R 321	A 3
34 335 00	Sicherungswiderstand 39 Ohm/½ W	Fuse resistor 39 Ohm/½ W	R 918	A 1
31 823 00	Sicherungswiderstand 220 Ohm/½ W	Fuse resistor 220 Ohm/½ W	R 606	A 7
40 296 00	Sicherungswiderstand 1 Ohm/1 W	Fuse resistor 1 Ohm/1 W	R 604	A 3
44 086 00	Trimmer Kondensator VTC 51A 144A 6pF	Trimmer capacitor 6pF	CT 2	A 4
24 377 00	Trimmer Kondensator VTC 51F 133A 30pF	Trimmer capacitor 30 pF	CT 1	A 3
46 837 00	Display Tuner LTP6M9011A	Display Tuner LTP6M9011A	LCD 201	C 7
46 838 00	Display CD LTP4R2011A	Display CD LTP4R2011A	LCD 701	C 6
40 306 00	Tuner FE 407/ET-A036	Tuner FE 407/ET-A036		D 6
46 840 00	Lämpchen 15V 30mA	Pilot lamp 15V/30mA		A 4
48 007 00	IR-Empfänger Queens 200	IR-Receiver Queens 200		C 2
48 008 00	Netztrafo	Power transformer		D 7
40 305 00	Microschalter Bandsorte	Leaf switch tape select		A 6
34 545 00	Tipptaste	Tact switch	Diverse	A 3
34 033 00	A/W-Schiebeschalter	Rec/PB switch	S 401 a-d	A 8
44 089 00	Netzschalter	Power switch	SW 301	B 0
29 747 00	Tastenschalter	Push switch	SW 402-404	B 1
46 832 00	Tastensatz 7fach Funktion	Function switch	SW 1-8	C 6
34 034 00	Mikrofonbuchse	Microphone jack	J 401	B 3
46 842 00	Buchse Kopfhörer	Headphone jack	J 502	B 0
24 358 00	Buchse Antenne	Antenna jack		A 6
34 338 00	Buchse Lautsprecher (Doppel)	Speaker DIN jack	J 501	A 7
32 952 00	Buchse Chinch CD	2-Pin RCA jack		A 6

Verdrahtungsplan Queens 200
Wiring diagram Queens 200



Hauptplatine Queens 200
Main P.C.B. Queens 200

Bestückungsseite
Top view



Schaltbild Receiver Queens 200

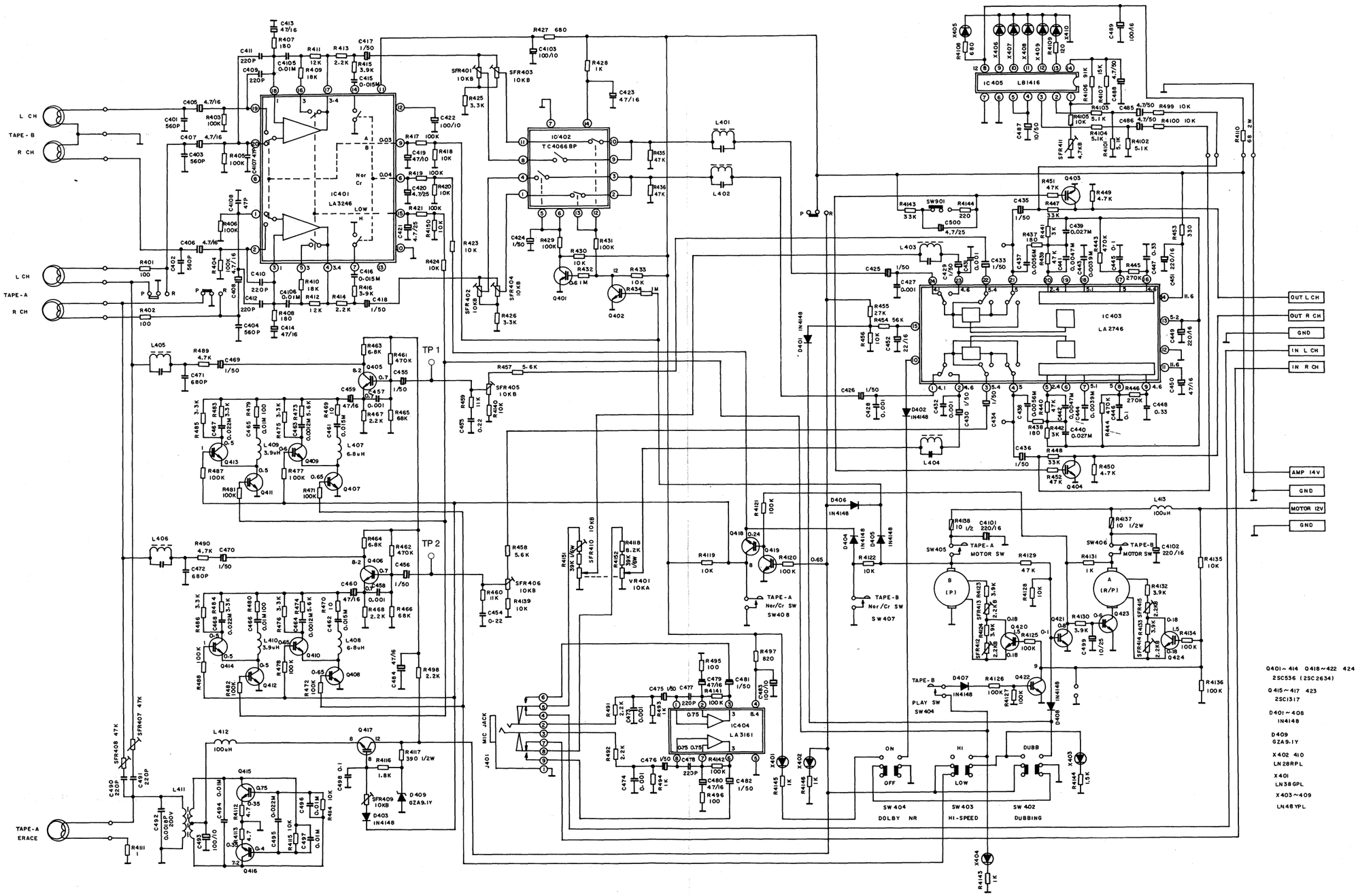
Circuit diagram receiver Queens 200

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
IC 1	2.27	2.27	2.27	0	8.2	8.2	8	3.6	3.5	3.1	1.2	1.5	0.3	0.3	1.17	1.5	8.6	2	2	3.6	3.6	1.4								
IC 2	0	2.3	1.7	1.6	1.6	7	0	0.5	5.1/0.3	1.3	1.3	0	1.3	1.3	1.3	0.8														
IC 301	0	5.6	0	0	0	0	0	0	0	0	0	0	0	0	2.5	2.3	0	0	0	0	0.	0	0	0	0	0	0	0	0	0
IC 302	0	0	0	0	0	0	0	0	0	0	0	0	0	6.2																
IC 303	0	0.58	0.76	0.5	0	0	14	14	0.76	0.58																				
IC 401	0	0	1	3.4	3	0.04	0	0	0.03	0	0	0	0	0	0	3	3.4	1	0	0										
IC 403	4.1	4.6	5.4	5	2.4	0	5.1	5	4.6	0	11.6	0	5.2	11.6	0	4.6	5	5.1	0	2.4	5	5.4	4.6	4.1						
IC 404	0	0.75	3	8.4	0	3	0.75	0.75																						
IC 405	0	0	0	0	0	0	0	12	0	0	0	0	0	0																
IC 501	0	0.5	30.5	0	0.5	0	15.5																							
IC 502	0	0.5	30.5	0	0.5	0	15.5																							
IC 901	1.2	0.7	2.7	11	0	2.7	0.7	1.2																						

PIN NO.	E	C	B
Q 1	12	0.7	11.3
Q4	0	0	0.62
Q201	0	8.2	0.6
Q202	0.6	8.2	1.09
Q203	1.09	13.84	1.67
Q204	2.93	0	4.87
Q205	2.93	0	4.87
Q206	2.93	0	4.87
Q207	0	0	0.68
Q208	0	4.98	0.36
Q401	0	0	0.6
Q402	0	12	0
Q405	0.7	8.2	0.7
Q407	0	0	0.65
Q408	0	0	0.65
Q409	0	0	0.6
Q410	0	0	0.65
Q412	0	0.5	0
Q413	0	0.5	1
Q414	0.5	0.5	1
Q415	0.35	0	0.75
Q416	0.35	7.2	0.4
Q417	8	12	8
Q418	0.24	8	0
Q419	0	0	0.65
Q420	0.18	0.18	1.5
Q421	0	0.8	0.1
Q422	0	9	0
Q424	0.18	0.18	1.5
Q604	0	15.7	0
Q605	-11.3	-12.66	-11.9
Q606	-11.9	-12.6	-12.6
Q607	12.5	-12.6	12.4
Q608	11.9	12.6	12.5
Q609	11.1	12.6	11.9
Q801	0.4	4.37	1.03
Q802	0.4	4.35	1.04
Q803	5.7	10.53	6.3
Q804	5.7	10.53	6.3
Q805	0.12	3.9	0.78
Q806	0.12	3.9	0.78
Q601	6.2	25.5	6.8
Q602	15	30.2	14.4
Q610	5	12.8	5.6

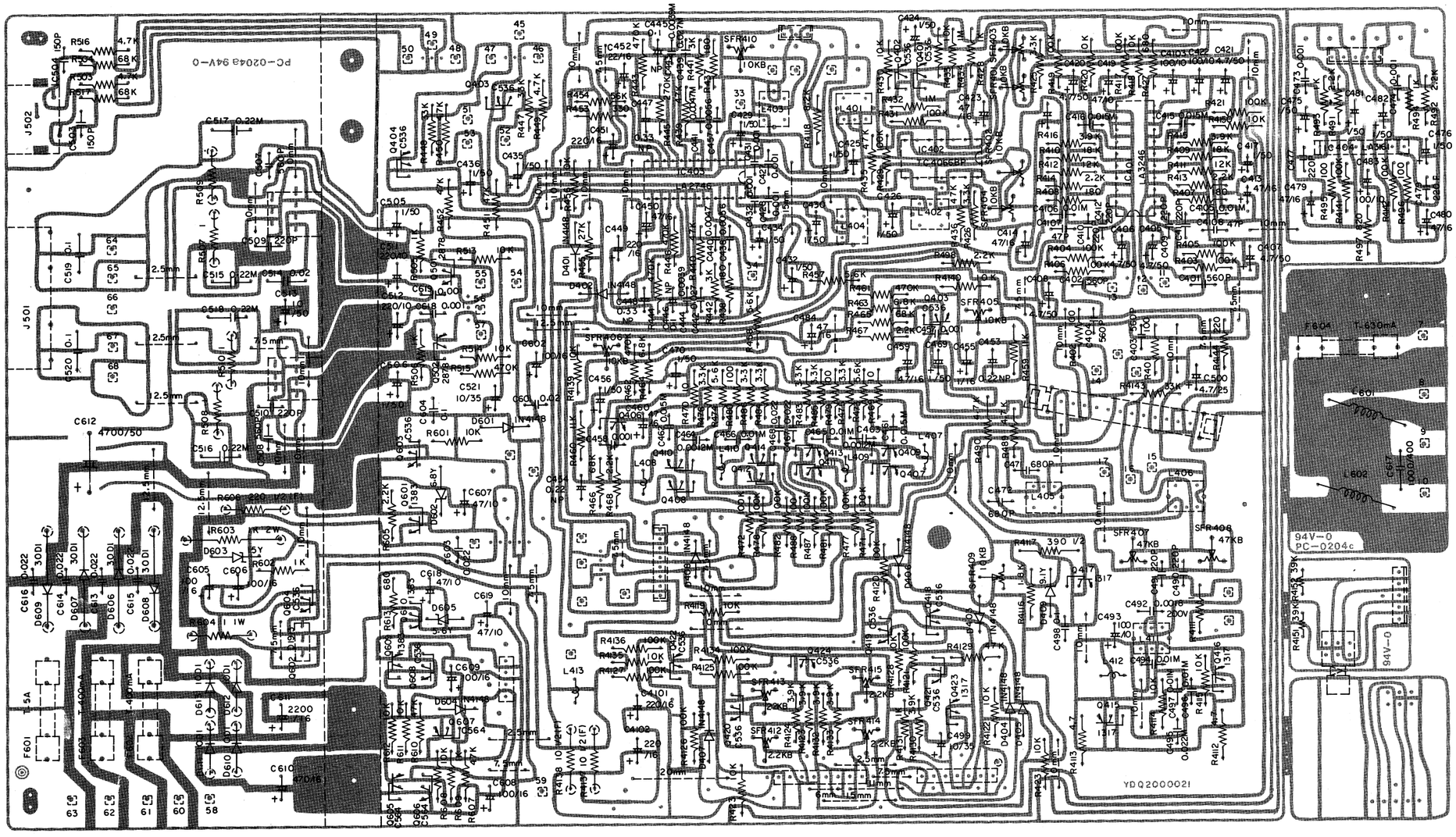
0 VR UP
1 VR DUN
2 NEXT/F-F
3 BACK/FB
7 POWER
8 P1
9 P2
10 P3
11 P4
12 P5
13 P6
14 P7
15 P8
16 P9
17 P1
18 P0
28 PLAY/PAUSE
29 STOP

Schaltbild Recorder Queens 200
Circuit diagram cassette Queens 200



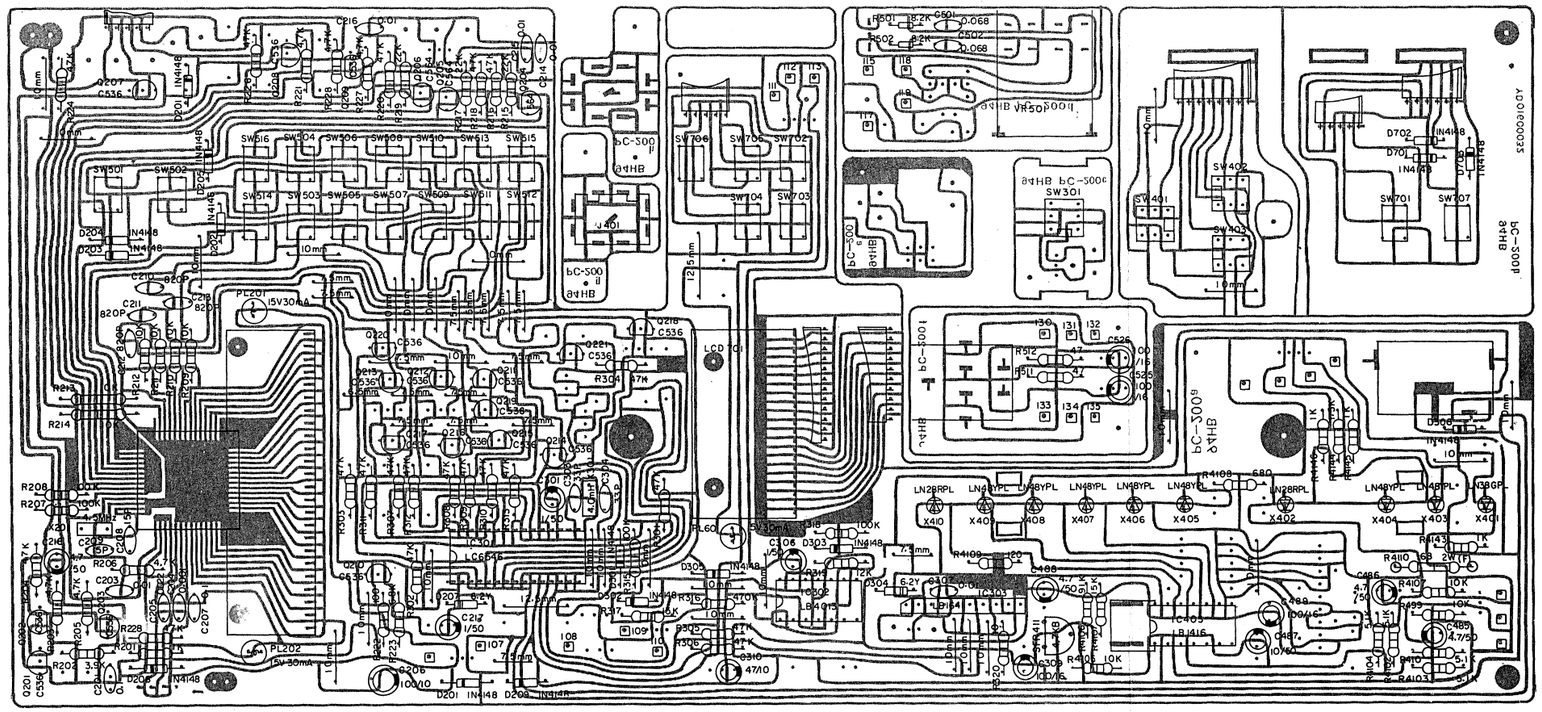
Hauptplatine Queens 200
Main P.C.B. Queens 200

Leiterbahnseite
Bottom view

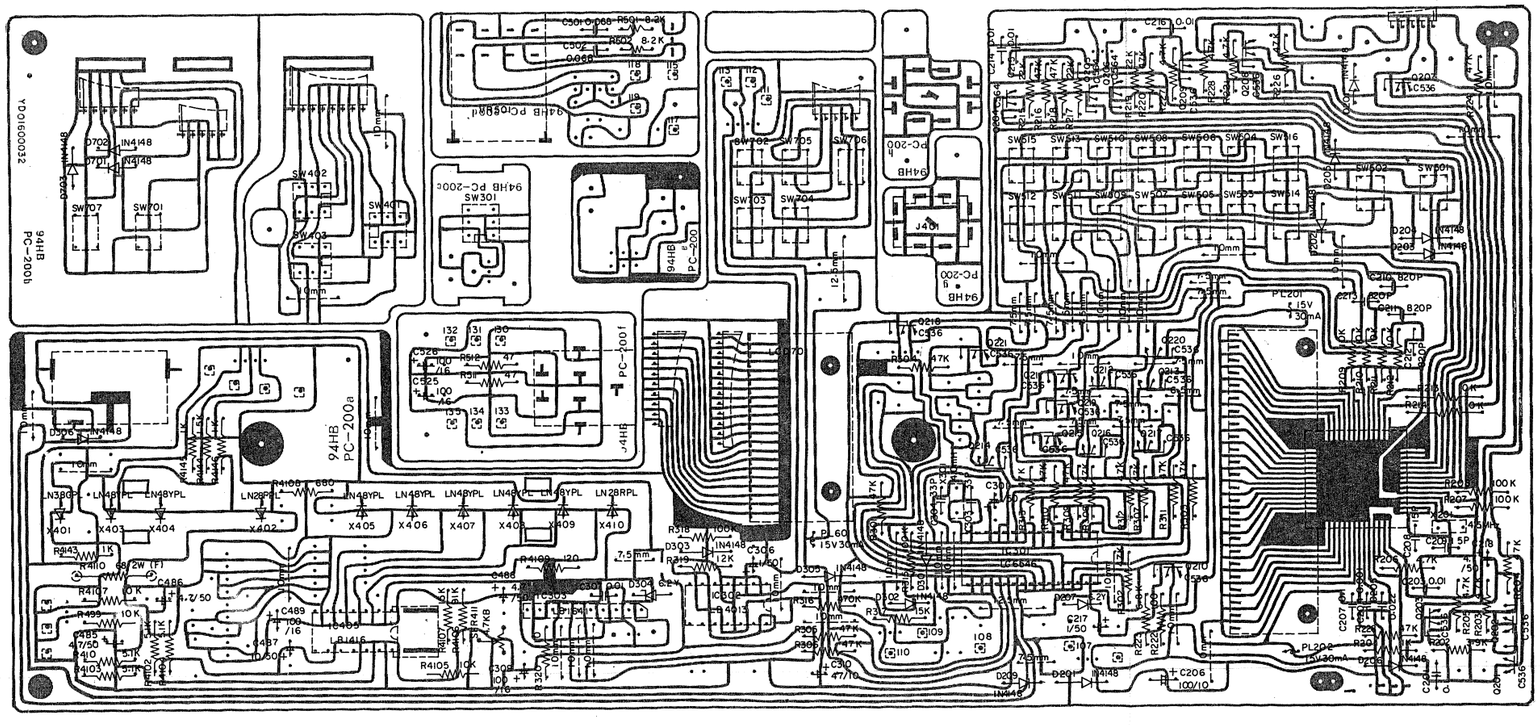


Displayplatine/Schalterplatinen CD–Tape, Queens 200
Display P.C.B./Switch P.C.B.'s CD–Tape, Queens 200

Bestückungsseite
Top view

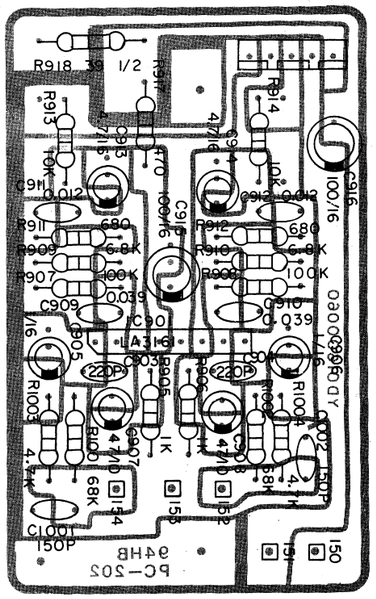


Leiterbahnseite
Bottom view

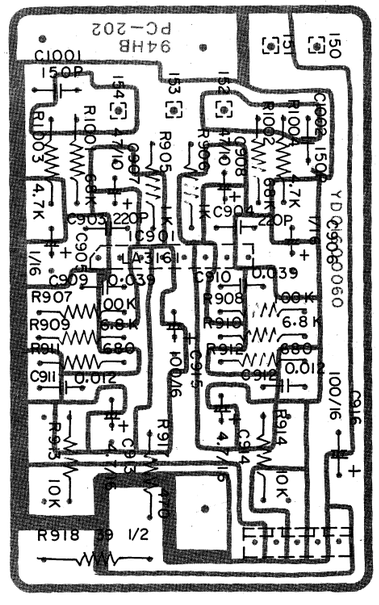


Phono-Vorverstärkerplatine
Pre-amplifier P.C.B. phono

Bestückungsseite
Top view

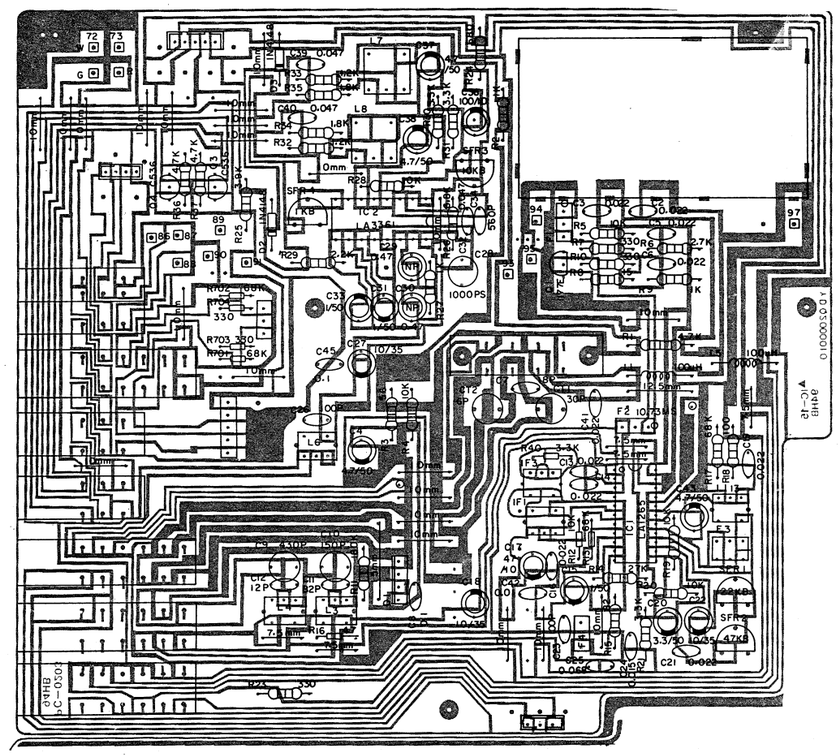


Leiterbahnseite
Bottom view

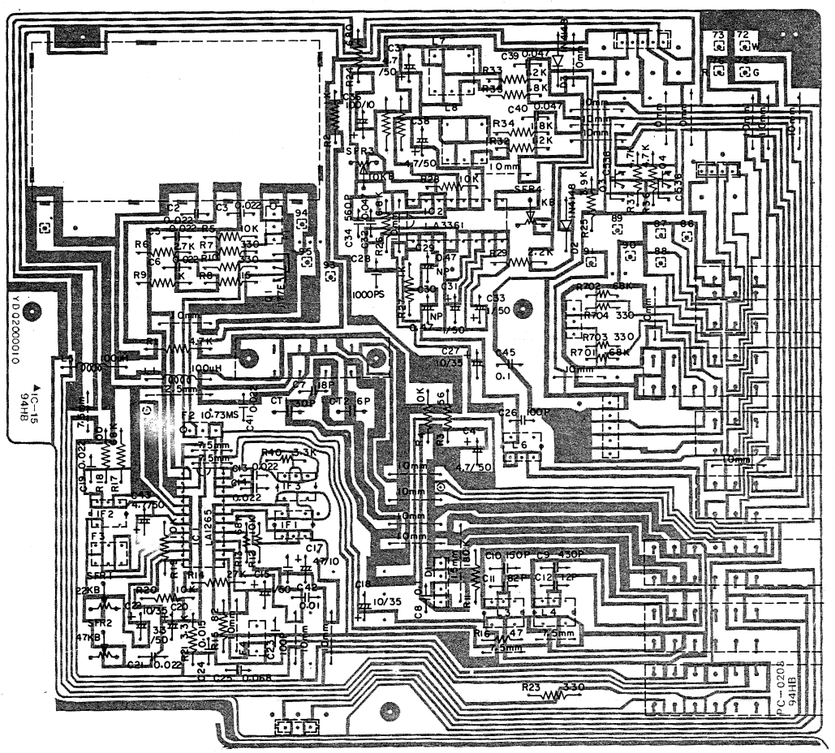


Tunerplatine Queens 200
Tuner P.C.B. Queens 200

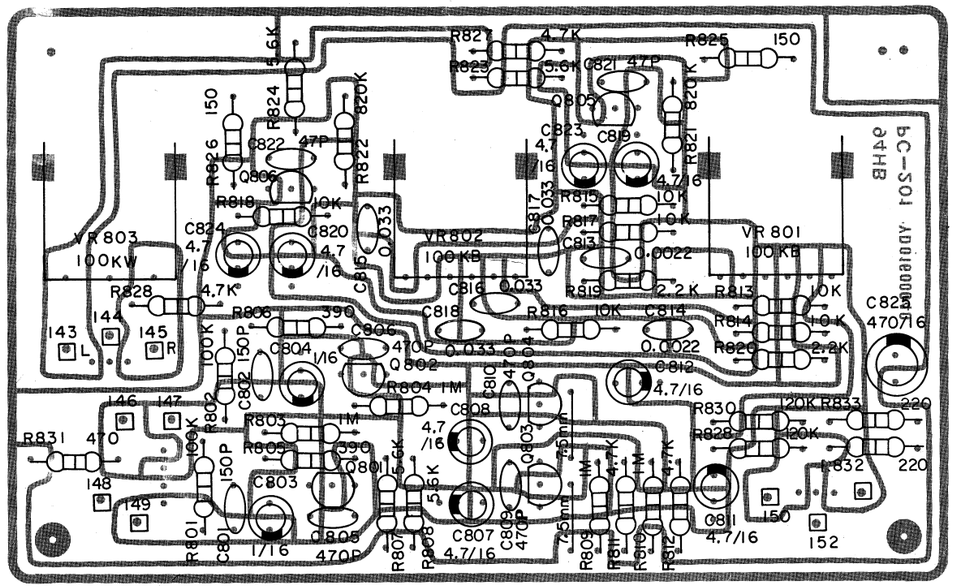
Bestückungsseite
Top view



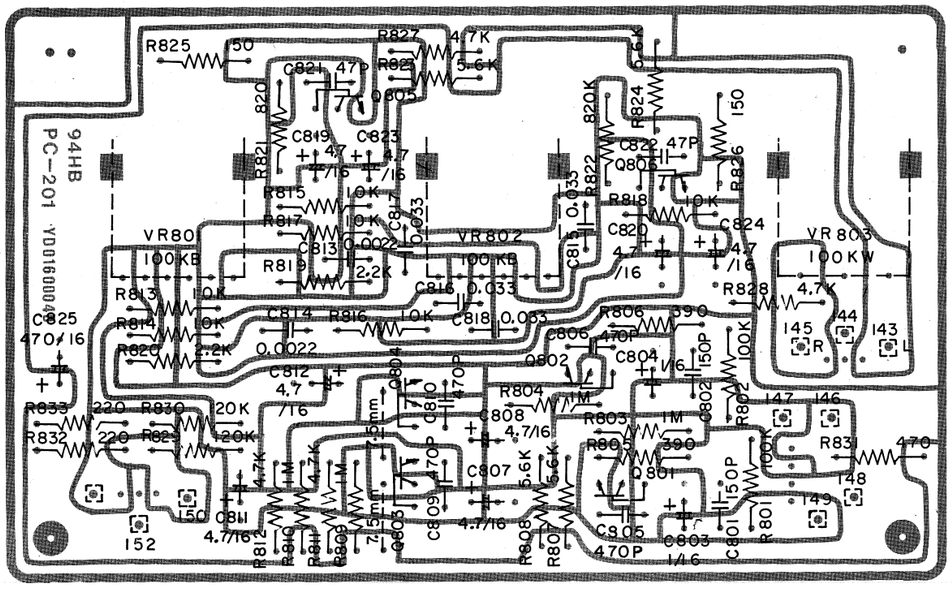
Leiterbahnseite
Bottom view



Bestückungsseite
Top view



Leiterbahnseite
Bottom view



ALIGNMENT PROCEDURE

MODEL Q200

1

LW

GENERAL ALIGNMENT CONDITIONS

1. Signal input must be kept as low as possible to avoid overload and clipping.
   (Use highest possible sensitivity of output indicator.)
2. Signal input should be kept as low as possibel to avoid A.G.C. action.
   (Set output indicator to highest sensitvity.)
3. Marker insertion and amplitude should not distort the oscillator and amplitude should not distort the oscilloscope trace.
4. Standard modulation is 400 Hz 30% .

INSTRUMENT REQUIRED

Signal source

* AM signal generator *
* Radio sweep generator *
* Sweep oscilloscope *

Output indicators

* AC millivolt meter *
* Oscilloscope *

STEP	CONNECT SIGNAL SOURCE TO -	CONNECT OUTPUT INDICATOR -	SET SIGNAL OR INSERT MARKER	SET RADIO DIAL TO -	ADJUST	ADJUST FOR -
1	Set function selector switch on the front panel to " LW " position.					
2	Signal generator connected to a loop	AC millivolt meter and oscilloscope connected across speaker	137 KHz	137 KHz	LW OSC L - 3	maximum
3			290 KHz	290 KHz		
4			170 KHz	170 KHz	LW BAR ANT COIL	
5			270 KHz	270 KHz	FM Trimmer CT - 1	
6	Repeat step 3 through 6 as necessary to obtain maximum sensitivity on station.					
8	Signal generator connected to a loop	AC millivolt meter and oscilloscope connected across speaker	164 KHz	164 KHz	SFR - 1	Auto lock at about 66 dB

ALIGNMENT PROCEDURE

MODEL Q200

2

MW

GENERAL ALIGNMENT CONDITIONS

1. Signal input must be kept as low as possible to avoid overload and clipping.
   (Use highest possible sensitivity of output indicator.)
2. Signal input should be kept as low as possible to avoid A.G.C. action.
   (Set output indicator to highest sensitivity.)
3. Maker insertion and amplitude should not distort the oscillator and amplitude should not distort the oscilloscope trace.
4. Standard modulation is 400 Hz.

INSTRUMENTS REQUIRED

Signal source

* AM signal generator *
* Radio sweep generator *
* Sweep oscilloscope *

Output indicators

* AC millivolt meter *
* Oscilloscope *

STEP	CONNECT SIGNAL SOURCE TO -	CONNECT OUTPUT INDICATOR -	SET SIGNAL OR INSERT MARKER	SET RADIO DIAL TO -	ADJUST	ADJUST FOR -
1	Set function selector switch on the front panel to " MW " position.					
2	Sweep generator connected to a loop or short piece of wire placed near AM antenna	Sweep oscilloscope connected to wire pin of the C 43 of C 44 and volume to mzximum	See amplitude of 455 KHz	Quiet point on band near 513 KHz	F 2	 Ampltude of filter
3	Signal generat-or connected to a loop	AC millivolt meter and oscilloscope connected across spraker	513 KHz	513 KHz	AM OSC L 4	maximum
4			1620 KHz	1620 KHz		
5			600 KHz	600 KHz	AM BAR ANT COIL	
6			1400 KHz	1400 KHz	RF Trimmer CT - 2	
7	Repeat step 3 through 6 necessary to obtain maximum sensitivity on station.					

ALIGNMENT PROCEDURE

MODEL Q200

3

FM

GENERAL ALIGNMENT CONDITION

1. Signal input must be kept as low as possible to avoid ocerload clipping. (Use highest possitivity of output indicator.)
2. Makers must be accurate (crystal controlled or calibrated). The 10.7 MHz marker used in each section of the FM alignment must be the same.
3. Signal input should be kept as low as possible to avoid A.G.C. action. (Set output indicator to highest sensitivity.)
4. FM signal generator RF output frequency must be monitoring.
5. Standard modulation is 1 KHz (40 KHz)

INSTRUMENTS REQUIRED

Signal sources

* FM signal generator *
* Radio sweep generator *
* Sweep oscilloscope *
* Frequency counter *

Output indicators

* AC millivolt meter *
* Oscilloscope *
* 114 KHz signal generator *

STEP	CONNECT SIGNAL SOURCE TO -	CONNECT OUTPUT INDICATOR TO -	SET SIGNAL OR INSERT MARKER	SET RADIO DIAL TO	ADJUST	ADJUST FOR -
1	Set function selector switch on the front panel to " FM " position.					
2	Radio sweep generator connect to FM front ent tuner pin 3	Oscilloscope connected to wire pin of the C 43 of C 44 and volume VR to maximum	10.6 10.7 10.8 MHz marker	Quiet scale pointer on band	IF 1 IF 3	Straightness and symmetry of " S " curve with 10.7 MHz makerd at zero crossover

4

MPX

GENERAL ALIGNMENT CONDITION

1. Adjust FM signal generator output to 1mV (60dB) with MPX modulation 1 KHz

Deviation = 33.75 KHz Pilot = 6 KHz

INSTRUMENTS REQUIRED

Signal source

* FM signal generator *
* Stereo signal generator *

Output indicator

* Frequency counter *
* AC millivolt meter *
* Oscilloscope *

STEP	CONNECT SIGNAL SOURCE TO -	CONNECT OUTPUT INDICATOR TO -	SET SIGNAL	SET RADIO DIAL	ADJUST	ADJUST FOR -
1	Set function selector switch on the front panel to " FM STEREO " Position.					
2	FM signal generator connected to FM aerial	Frequency counter connect to MPX test point	98 MHz and modulation off, pilot signal off too	98 MHz	SFR - 3	19.00 KHz + / - 50 Hz

Abgleichanweisung Cassette Queens 200
Alignment procedure cassette Queens 200

TAPE POSITION Recorderstellung	INPUT SIGNAL Eingangsspannung	TEST TAPE Testcassette	MEASURING INSTRUMENT Meßgerät	TEST POINT Meßpunkt	ADJUSTMENT LOCATION Abgleichpunkt	MEASURING SIGNAL Meßsignal

1. Head azimuth/A/W-Kopf-Einstellung

PLAYBACK		MTT-114 N 10 kHz	V.T.V.M AC-Millivoltmeter	OUT L CH OUT R CH	AZIMUTH SCREW	NF-max.

2. Tape speed/Geschwindigkeit

PLAYBACK LOW		MTT- 111 N 3000 Hz	FREQUENCY COUNTER Frequenz-zähler	OUT L CH OUT R CH	TAPE A SFR 415 TAPE B SFR 413	3000 Hz
PLAYBACK HIGH		MTT-111 N 3000 Hz		OUT L CH OUT R CH	TAPE A SFR 414 TAPE B SFR 412	4800 Hz

3. Dolby level/Dolby-Pegel

PLAYBACK		MTT-150 DOLBY TAPE 400 Hz	V. T. V. M AC-Millivoltmeter	IC 403 Pin 4 Pin 21	TAPE A SFR 404 SFR 403 TAPE B SFR 402 SFR 401	580 mV

4. Oscillator coil frequency/Oszillatorfrequenz

RECORD		AC-513 IEC-II	FREQUENCY COUNTER Frequenzzähler	ERASE HEAD Löschkopf	L-411	125 kHz

5. Trap coil/HF-Sperre

RECORD		AC-513 IEC-II	V. T. V. M AC-Millivoltmeter	R 489 R 490	L-405 L-406	MINIMUM

6. Head bias level/Vormagnetisierung

RECORD		AC-513 IEC-II	V. T. V. M AC-Millivoltmeter	R/P HEAD	SFR 407/SFR 408	76 mV
		AC-212 IEC-I		R/P HEAD	SFR 409	55 mV

7. Level meter/Anzeige

RECORD	AUX IN 1 kHz/500 mV	AC-513 IEC-II	VR 401 to 580 mV at IC 403 Pin 4/Pin 20 Mit VR 401 an IC 403 580 mV einstellen.	SFR-411 5 YELLOW LED LIGHT SFR-411 so abgleichen, daß alle 5 gelben LED's leuchten.

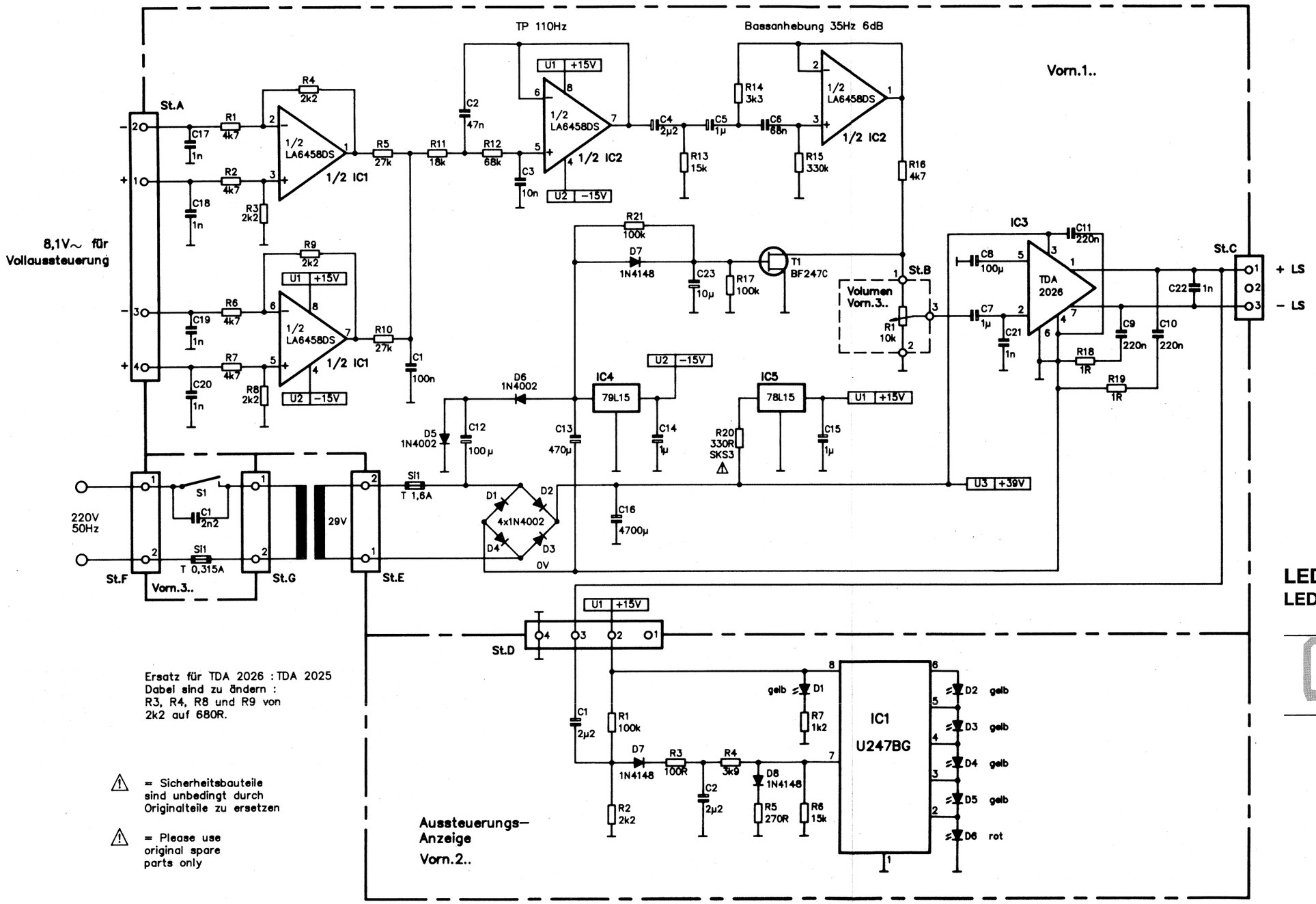
8. Record level/Aufnahmepegel

RECORD	AUX IN 1 kHz/500 mV	AC 513 IEC-II	V. T. V. M AC-Millivoltmeter	TP 1 TP 2	VR 401 to 580 mV at IC 403 Pin 4/Pin 20 SFR 405/SFR 406	185 mV

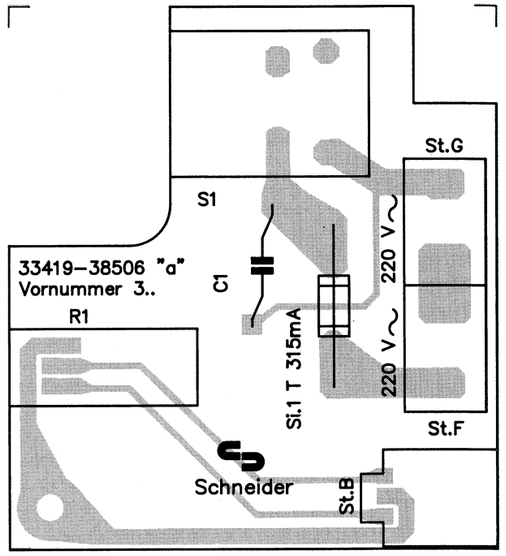
Löschspannung: Fe: ca. 150 Vss
Cr: ca. 200 Vss

Vormagnetisierung: Fe: ca. 65 Vss
Cr: ca. 80 Vss

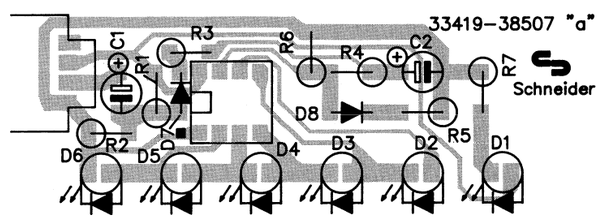
Schaltbild Subwoofer
Circuit diagram Subwoofer



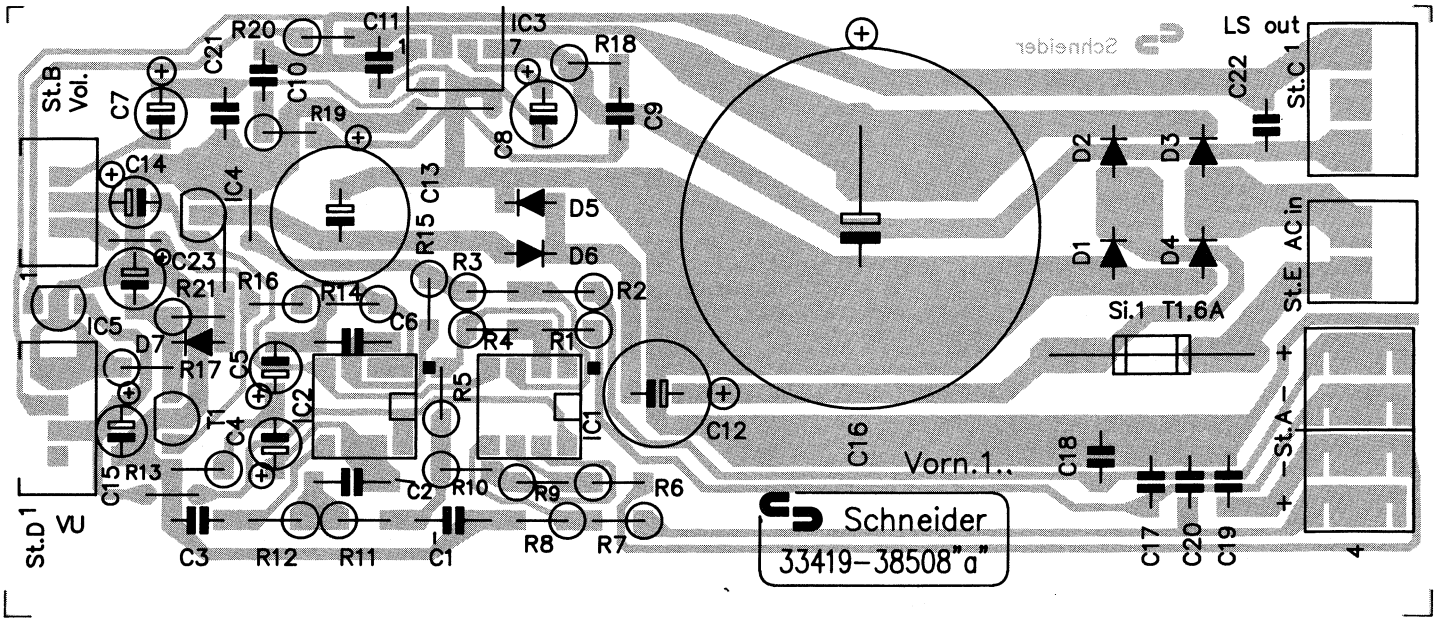
Netzschalter-Platine Subwoofer
Power switch P.C.B. Subwoofer



LED-Kette-Platine Subwoofer
LED power meter P.C.B. Subwoofer



Verstärker-Platine Subwoofer
Amplifier P.C.B. Subwoofer



Ersatzteilliste Subwoofer
Spare parts subwoofer

Bestell-Nr./ Part. No.	Bezeichnung	Description	Position	Preisgruppe/ Price key
47 063 00	Gehäuse Queens Subwoofer	Housing Queens subwoofer		D 9
47 061 00	Abdeckgitter Queens Subwoofer (vorn)	Mask Queens subwoofer (front)		B 8
47 066 00	Abdeckgitter Queens Subwoofer (oben)	Mask Queens subwoofer (top)		B 5
47 079 00	Frontteil Queens Subwoofer	Front panel Queens subwoofer		D 5
41 970 00	Frontblende Queens (Plexiglas)	Front window Queens (plexiglass)		C 4
27 747 00	Fuß 50 mm mit Gummi	Foot 50 mm with rubber		A 8
18 331 00	Tastenknopf 24 × 15,5 (Power on/off)	Knob push 24 × 15.5 (Power on/off)		A 3
18 336 00	Drehknopf 14,6 (Bass level)	Knob VR 14.6 (Bass level)		A 3
27 638 00	Lautsprecher 8 Ohm KW-200-1328	Speaker 8 Ohm KW-200-1328		D 2
38 487 00	Trafo EI 66	Power transformer EI 66		D 8
11 760 00	Buchse Lautsprecher	Speaker jack		A 3
39 258 00	Verstärker-LP kpl. MS1	Amplifier P.C.B. assembly		D 5
38 510 00	Transistor BF 247 C	Transistor BF 247 C	T 101	B 0
23 257 00	IC LA 6458 DS Dual-OP	IC LA 6458 DS	IC 101/102	A 9
38 511 00	IC 78 L 15	IC 78 L 15	IC 105	A 3
38 512 00	IC 79 L 15	IC 79 L 15	IC 104	A 3
38 286 00	IC TDA 2025	IC TDA 2025	IC 103	B 7
38 007 00	Zenerdiode ZPD 18(K)	Zenerdiode ZPD 18	D 107	A 1
31 729 00	Diode 1 N 4002	Diode 1 N 4002	D 101	A 2
38 555 00	Sicherungswiderstand 330 Ohm/⅓ W	Fuse resistor 330 Ohm/⅓ W	R 120	A 2
39 259 00	Netzschalter-LP kpl. MS1	Power switch P.C.B. assembly		C 3
38 486 00	Drehwiderstand Lautstärke 10 K	Rotary VR 10 K volume	R 301	B 5
38 030 00	Netzschalter	Power switch	S 301	B 2
39 260 00	LED-Kette-LP kpl. MS1	LED Power meter P.C.B. assembly		C 1
02 424 00	IC U 247 B Anzeige-IC	IC U 247 B (indication IC)	IC 201	B 5
31 463 00	Diode 1 N 4148 (A)	Diode 1 N 4148 (A)	D 207/208	A 1
38 502 00	Leuchtdiode rot	LED red	D 206	A 3
38 500 00	Leuchtdiode gelb	LED yellow	D 201-205	A 3
47 069 00	Sty.-Verp. Queens Subwoofer/Unterschr.	Polyfoam Queens subwoofer		C 6
47 068 00	Faltkarton Queens Subwoofer/Unterschr.	Carton Queens subwoofer		C 8

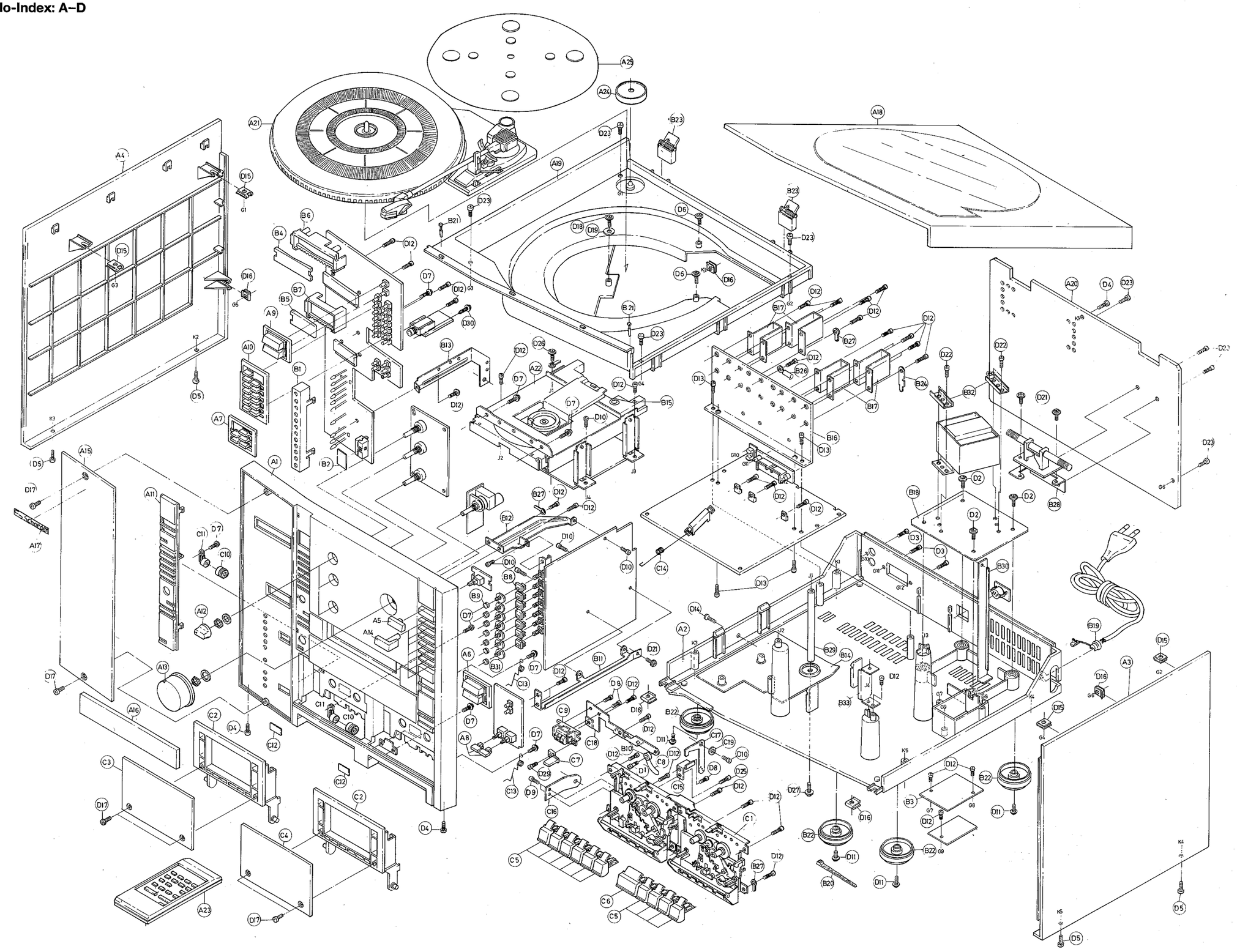
Ersatzteilliste Gehäuseteile Queens 160
Spare parts list housing parts Queens 160

Bestell-Nr./ Part. No.	Bezeichnung	Description	Position	Preisgruppe/ Price key
46 800 00	Frontteil	Front panel	A 1	C 7
46 801 00	Gehäuseboden	Bottom chassis	A 2	C 6
46 802 00	Seitenteil rechts	Side panel right	A 3	C 3
46 803 00	Seitenteil links	Side panel left	A 4	C 2
46 804 00	Taste On/Off	Button on/off	A 5	A 1
46 805 00	Tastenblock CD 2fach	Preset button CD 2×	A 6	A 2
46 806 00	Tastenblock CD 5fach	Preset button CD 5×	A 7	A 2
46 807 00	Taste Dubbing (2)	Button dubbing (2)	A 8	A 0
46 808 00	Tastenblock Tuning	Button tuning	A 9	A 2
46 809 00	Tastenblock 13fach	Preset button 13×	A 10	A 3
46 810 00	Tastenblende	Preset button frame	A 11	A 7
46 811 00	Drehknopf 19 mm (Klang, Balance)	Knob VR 19 mm (Tone, balance)	A 12	A 1
46 812 00	Drehknopf 52 mm (Lautstärke)	Knob main VR (Volume)	A 13	B 4
46 833 00	Taste Funktionswahl (7)	Button function (7)	A 14	A 2
46 813 00	Frontblende (Plexiglas)	LCD window	A 15	C 8
46 814 00	Blende CD-Schublade	CD door	A 16	A 7
35 520 00	Schriftzug Schneider	Badge Schneider	A 17	A 3
46 815 00	Abdeckhaube	Dust cover	A 18	C 9
46 816 00	Zarge Plattenspieler	Player board	A 19	C 3
46 817 00	Rückwand	Back board	A 20	B 5
46 818 00	Plattenspieler kpl.	Player assembly	A 21	E 5
46 819 00	CD-Spieler kpl.	CD player	A 22	G 2
46 851 00	Doppel-Cass.-Mechanik TN-21ZSW-494	Double cass. mechanic TN-21ZSW-494	C 1	E 8
46 820 00	Fernbedienungsgeber Queens	Remote control	A 23	D 5
03 460 00	Plattenpuck	Adapter 45 rpm	A 24	A 2
46 821 00	Matte Plattenteller	Turn-table mat	A 25	B 5
46 822 00	Streuglas Tunerdisplay	Screen tuner display	B 4	A 3
46 823 00	Streuglas CD-Display	Screen CD display	B 5	A 2
46 824 00	Reflektor Tunerdisplay	Reflector tuner display	B 6	A 2
46 825 00	Reflektor CD-Display	Reflector CD display	B 7	A 2
40 026 00	Steckhülse Funktionsschalter	Spacer function switch	B 8	A 1
46 826 00	Pulley Zählwerk	Pulley tape counter	B 10	A 0
46 827 00	Gehäusefuß	Foot	B 22	A 9
37 813 00	Scharnier Abdeckhaube	Hinge assembly	B 23	B 0
46 828 00	Sicherungsknebel Funktionsschalter	Spacer function switch	B 31	A 1
46 852 00	Cassettenfach	Cassette case	C 2	A 5
46 853 00	Cassettenfachdeckel A	Cassette window A	C 3	B 1
46 854 00	Cassettenfachdeckel B	Cassette window B	C 4	B 1
46 855 00	CR-Taste schmal	Cass. key small	C 5	A 2
46 856 00	CR-Taste breit	Cass. key large	C 6	A 2
46 857 00	Taste Zählwerk	Counter knob	C 7	A 1
46 858 00	Zählwerkriemen	Counter belt	C 8	A 2
46 859 00	Zählwerk	Tape counter	C 9	B 4
40 790 00	Dämpfrad	Damper gear	C 10	A 2
40 791 00	Dämpfradhalter	Damper holder	C 11	A 2
46 860 00	Feder Cassettenfach	Cass. open spring	C 13	A 1
46 861 00	Feder AW-Schalter	Cass. rec. spring	C 14	A 2
46 862 00	Zierschraube	Screw bolt	D 17	A 1
46 843 00	Karton Queens 160/200	Carton Queens 160/200		C 3
46 844 00	Styropor-Verpackung rechts	Poly foam right		C 0
46 845 00	Styropor-Verpackung links	Poly foam left		C 0
42 833 00	Queens 160 LS links	Queens 160 LS left		
42 834 00	Queens 160 LS rechts	Queens 160 LS right		
46 827 00	Gehäusefuß LS-Box	Foot speakerbox		A 9

Explosionsdarstellung Gehäuse Queens 160

Exploded view housing Queens 160

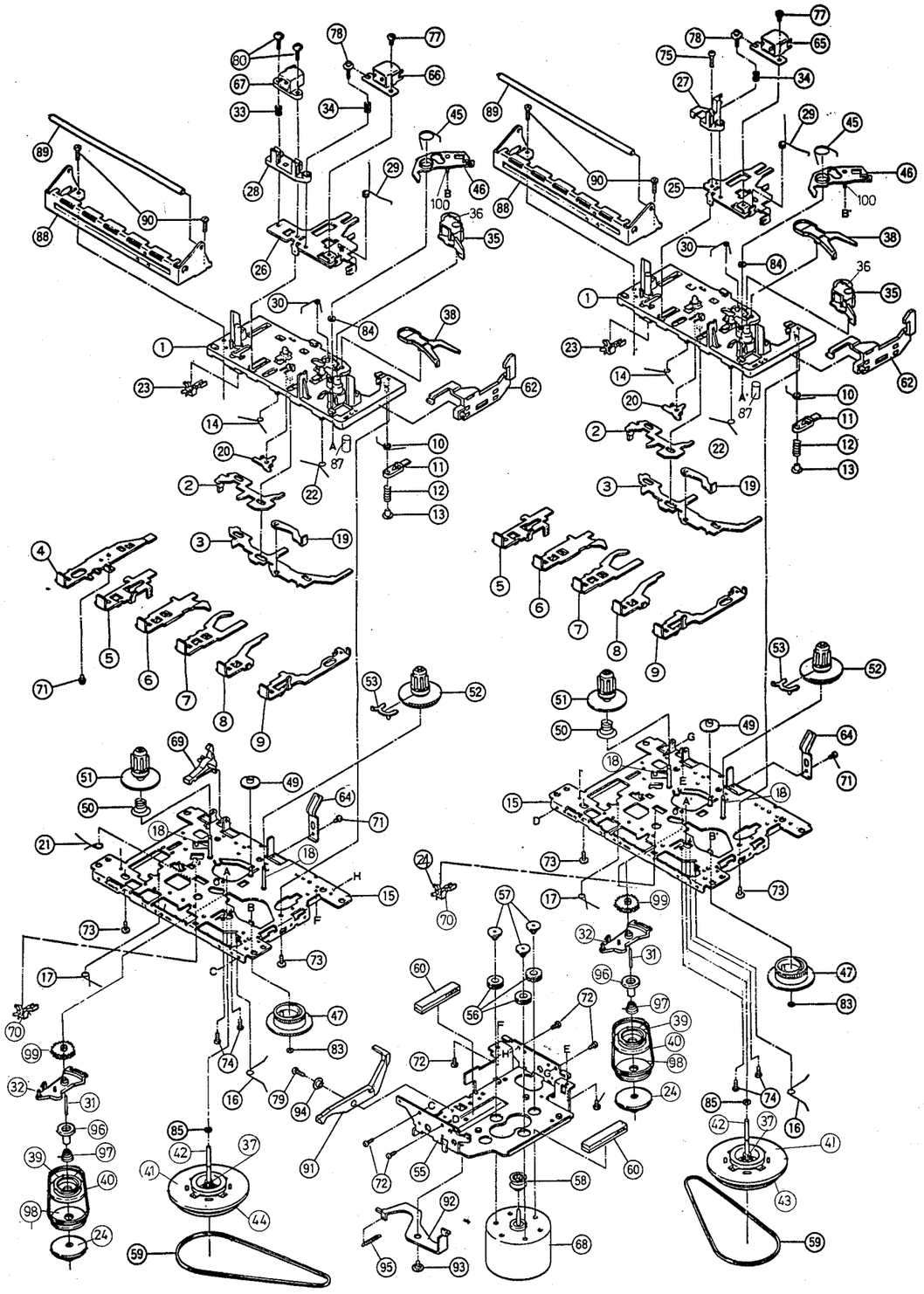
Explo-Index: A–D



Explosionsdarstellung Cassettenmechanik Queens 160

Exploded view cassette mechanism Queens 160

Explo-Index: CM



Ersatzteilliste Cassettenmechanik Queens 160

Spare parts list cassette mechanism Queens 160

Bestell-Nr./ Part. No.	Bezeichnung	Description	Position	Preisgruppe/ Price key
46 863 00	Feder Pauserasthebel	Spring pause lever	CM 10	A 0
46 417 00	Pauserasthebel	Pause lever	CM 11	A 0
44 130 00	Druckfeder Pauserasthebel	Spring pause lever	CM 12	A 0
44 131 00	Sicherungsstöpsel Pause	Pause stopper	CM 13	A 0
32 428 00	Feder Tastenhebel (Vor-, Rücklauf)	Button lever spring (FF, REW.)	CM 14	A 3
46 864 00	Feder Aufnahmetaste	Spring rec. button	CM 21	A 0
32 423 00	Feder Tastenhebel (Stop, Pause)	Button lever spring (Pause, Stop)	CM 22	A 3
44 132 00	Mikroschalter MSW L 541 T	Leaf switch MSW L 541 T	CM 23	A 4
45 760 00	Feder Kopfträgerplatte	Spring head panel	CM 29	A 1
32 432 00	Feder Löschkopf	Erase head spring	CM 33	A 3
32 435 00	Feder A/W-Kopf	Spring R/P head	CM 34	A 3
32 436 00	Bandandruckrolle kpl.	Pinch roller assembly	CM 35	B 6
44 135 00	Tasthebel Endabschaltung	Sensing lever stop	CM 38	A 1
44 137 00	Rutschkupplung kpl.	RF clutch assembly	CM 39	A 7
44 138 00	Riemen Rutschkupplung	Belt RF clutch	CM 40	A 4
46 865 00	Schwungmasse AW-Laufwerk	Fly-wheel R/P	CM 44	B 7
46 866 00	Schwungmasse Wiedergabe-Laufwerk	Fly-wheel Play mechanism	CM 43	B 7
44 136 00	Kurvenzahnrad	Cam gear	CM 47	A 2
44 140 00	Zahnrad Vorlauf	FF gear	CM 49	A 1
44 319 00	Feder Wickelteller links	Back tension spring	CM 50	A 0
44 141 00	Wickelteller links	Supply reel	CM 51	A 3
44 142 00	Wickelteller rechts kpl.	Take-up reel assembly	CM 52	A 4
46 436 00	Spange Wickelteller	Sensor	CM 53	A 1
32 453 00	Gummipuffer Motor	Motor rubber	CM 56	A 2
32 454 00	Schraube Motor	Motor collar screw	CM 57	A 2
44 778 00	Pulley-Motor	Pulley motor	CM 58	A 6
40 818 00	Antriebsriemen	Main belt	CM 59	A 3
46 418 00	Gleithebel Eject	Eject slide lever	CM 62	A 3
32 459 00	Cassettenandruckfeder	Pack spring	CM 64	A 5
34 348 00	Wiedergabekopf	Play head	CM 65	B 6
34 349 00	A/W-Kopf	R/P head	CM 66	B 6
24 513 00	Löschkopf	Erase head	CM 67	B 0
46 177 00	Antriebsmotor SH U 2 L	Drive motor SH U 2 L	CM 68	C 6
32 451 00	Aufnahmesperrhebel	Record safety lever	CM 69	A 5
44 133 00	Mikroschalter MSW-17820 MVDO	Leaf switch MSW-17820 MVDO	CM 70	A 7
32 462 00	Sicherungsscheibe Schwungmasse	Polyslider washer fly-wheel	CM 85	A 0
46 867 00	Kick-Hebel Doppelpause	Kick lever pause	CM 91	A 1
46 868 00	Feder Kick-Hebel	Spring kick lever	CM 95	A 0

Ersatzteilliste Plattenspieler Queens 160/Queens 200

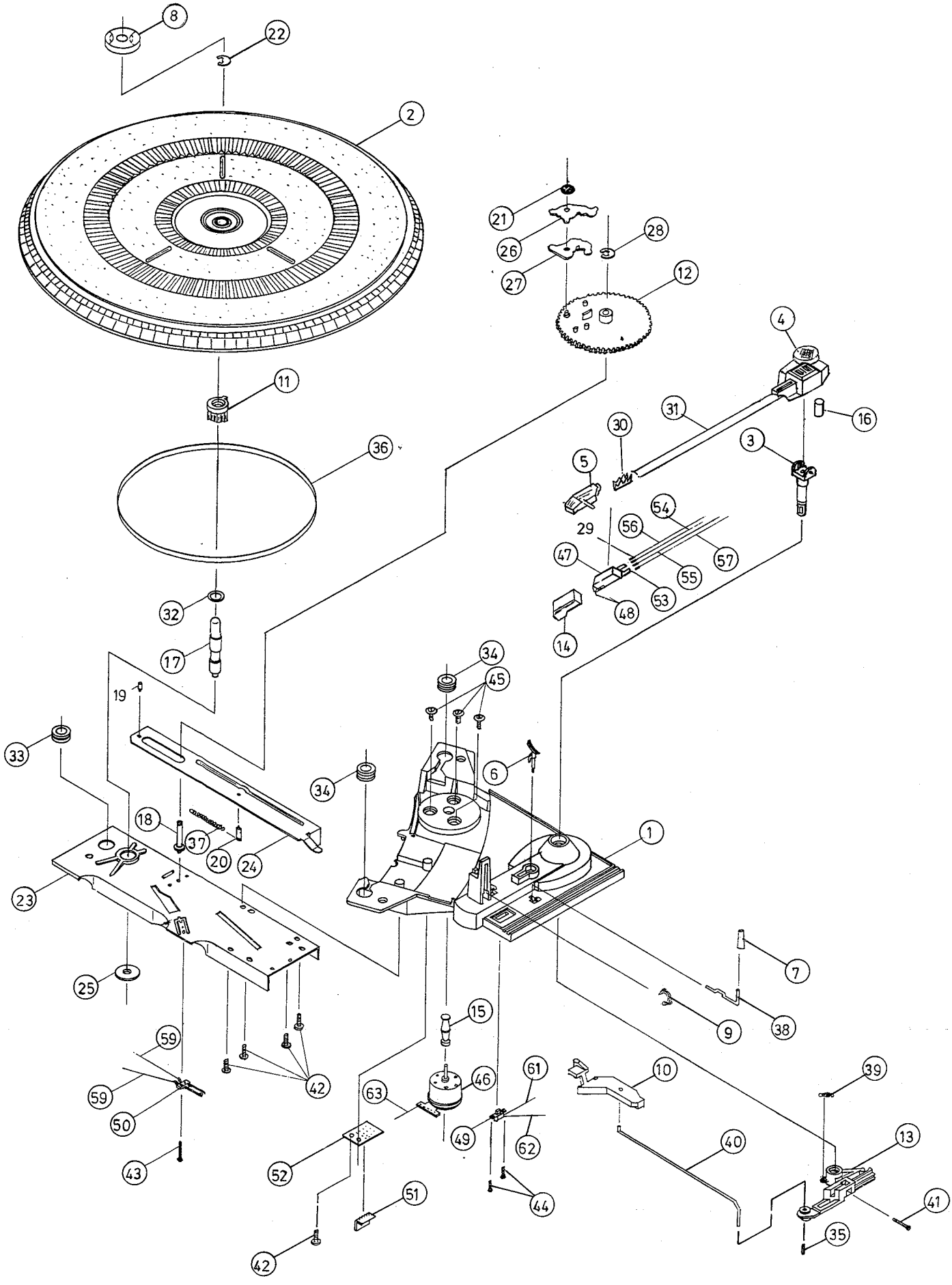
Spare parts list player Queens 160/Queens 200

Bestell-Nr./ Part. No.	Bezeichnung	Description	Position	Preisgruppe/ Price key
46 819 00	Plattenspieler kpl.	Player assembly	A 21	E 5
48 018 00	Plattenteller mit Zahnrad	Turn-table with gear	PL 2+11	C 3
48 019 00	Tonarm kpl. mit System	Tone arm assembly with system		D 5
48 020 00	Tonarmlift	Cueing shaft	PL 6	A 2
46 182 00	Liftknopf	Knob	PL 7	A 1
03 460 00	Puck	Adapter	PL 8	A 2
34 357 00	Clip Tonarmstütze	Pick-up cramper	PL 9	A 1
48 021 00	Gleitschieber Motorschalter	Trip pawl	PL 10	A 2
48 022 00	Kurvenrad	Cam gear	PL 12...	A 9
48 023 00	Endschalthebel	Control lever	PL 13...	A 3
48 024 00	Nadelschutz	Stylus cover	PL 14	A 1
40 829 00	Motorpulley	Motor pulley	PL 15	A 2
32 868 00	Sicherungsring Plattenteller	E-ring turn-table	PL 22	A 0
48 025 00	Gleithebel	Drive plate	PL 24...	A 7
14 229 00	Sicherungsring Kurvenrad	E-ring cam gear	PL 28	A 1
48 026 00	Lagergummi unten	Grommet	PL 33	A 2
48 027 00	Lagergummi oben (2)	Grommet (2)	PL 34	A 2
48 028 00	Gummiring	Insert rubber	PL 35	A 0
34 371 00	Antriebsriemen	Belt	PL 36	B 0
48 029 00	Feder Gleithebel	Spring drive plate	PL 37	A 2
48 030 00	Lifthebel	Cueing lever	PL 38	A 2
48 031 00	Schubstange	Control lever	PL 40	A 3
46 423 00	Motor SHR 2 R	Motor SHR 2 R	PL 46	C 5
48 032 00	System	Cartridge	PL 47	D 1
48 033 00	Abtastnadel	Stylus	PL 48	C 4
48 034 00	Schiebeschalter 33/45	Slide switch	PL 49	B 0
46 014 00	Microschalter Motor	Leaf switch	PL 50	A 5

Explosionsdarstellung Plattenspieler

Exploded view player Queens 160/Queens

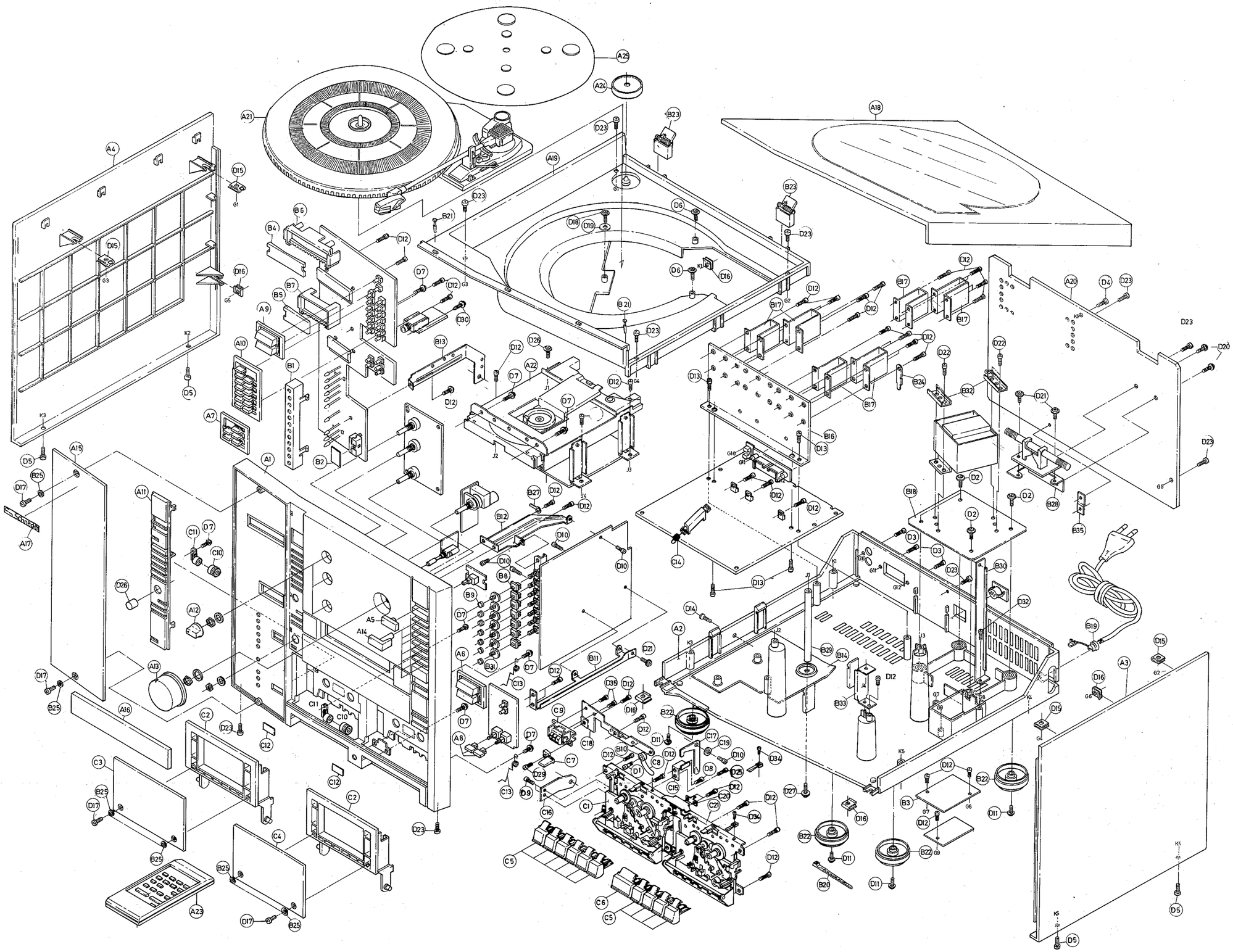
Explo-Index: PL



Ersatzteilliste Gehäuseteile Queens 200
Spare parts list housing parts Queens 200

Bestell-Nr./ Part. No.	Bezeichnung	Description	Position	Preisgruppe/ Price key
46 995 00	Frontteil	Front panel	A 1	C 7
46 996 00	Gehäuseboden	Bottom chassis	A 2	C 5
46 802 00	Seitenteil rechts	Side panel right	A 3	C 3
46 803 00	Seitenteil links	Side panel left	A 4	C 2
46 804 00	Taste On/Off	Button on/off	A 5	A 1
46 805 00	Tastenblock CD 2fach	Preset button CD 2×	A 6	A 2
46 806 00	Tastenblock CD 5fach	Preset button CD 5×	A 7	A 2
46 807 00	Taste Dubbing (2)	Button dubbing (2)	A 8	A 0
46 808 00	Tastenblock Tuning	Button tuning	A 9	A 2
46 809 00	Tastenblock 13fach	Preset button 13×	A 10	A 3
46 997 00	Tastenblende	Preset button frame	A 11	A 7
46 811 00	Drehknopf 19 mm (Klang, Balance)	Knob VR 19 mm (Tone, balance)	A 12	A 1
46 812 00	Drehknopf 52 mm (Lautstärke)	Knob Main VR (Volume)	A 13	B 4
46 833 00	Taste Funktionswahl (7)	Button function (7)	A 14	A 2
46 813 00	Frontblende (Plexiglas)	LCD window	A 15	C 8
46 814 00	Blende CD-Schublade	CD door	A 16	A 7
35 520 00	Schriftzug Schneider	Badge Schneider	A 17	A 3
46 815 00	Abdeckhaube	Dust cover	A 18	C 9
46 816 00	Zarge Plattenspieler	Player board	A 19	C 3
46 817 00	Rückwand	Back board	A 20	B 5
46 818 00	Plattenspieler kpl.	Player assembly	A 21	E 5
46 819 00	CD-Spieler kpl.	CD player	A 22	G 2
46 998 00	Cass.-Mech. A/W TN-21ZSB-495	Cass. mech. R/P TN-21ZSB-495	C 1	E 0
46 999 00	Cass.-Mech. Wiedergabe TN-21ZSB-496	Cass. mech. Play TN-21ZSB-496	C 21	D 9
46 820 00	Fernbedienungsgeber Queens	Remote control	A 23	D 5
03 460 00	Plattenpuck	Adapter 45 rpm	A 24	A 2
46 821 00	Matte Plattenteller	Turn-table mat	A 25	B 5
46 822 00	Streuglas Tunerdisplay	Screen tuner display	B 4	A 3
46 823 00	Streuglas CD-Display	Screen CD display	B 5	A 2
46 824 00	Reflektor Tunerdisplay	Reflector tuner display	B 6	A 2
46 825 00	Reflektor CD-Display	Reflector CD display	B 7	A 2
40 026 00	Steckhülse Funktionsschalter	Spacer function switch	B 8	A 1
46 826 00	Pulley Zählwerk	Pulley tape counter	B 10	A 0
46 827 00	Gehäusefuß	Foot	B 22	A 9
37 813 00	Scharnier Abdeckhaube	Hinge assembly	B 23	B 0
46 828 00	Sicherungsknebel Funktionsschalter	Spacer function switch	B 31	A 1
46 852 00	Cassettenfach	Cassette case	C 2	A 5
46 853 00	Cassettenfachdeckel A	Cassette window A	C 3	B 1
46 854 00	Cassettenfachdeckel B	Cassette window B	C 4	B 1
46 855 00	CR-Taste schmal	Cass. key small	C 5	A 2
46 856 00	CR-Taste breit	Cass. key large	C 6	A 2
46 857 00	Taste Zählwerk	Counter knob	C 7	A 1
46 858 00	Zählwerkriemen	Counter belt	C 8	A 2
46 859 00	Zählwerk	Tape counter	C 9	B 4
40 790 00	Dämpfrad	Damper gear	C 10	A 2
40 791 00	Dämpfradhalter	Damper holder	C 11	A 2
46 860 00	Feder Cassettenfach	Cass. open spring	C 13	A 1
48 000 00	Feder AW-Schalter	Cass. rec. spring	C 14	A 2
46 862 00	Zierschraube	Screw bolt	D 17	A 1
46 843 00	Karton Queens 160/200	Carton Queens 160/200		C 3
46 844 00	Styropor-Verpackung rechts	Poly foam right		C 0
46 845 00	Styropor-Verpackung links	Poly foam left		C 0
42 835 00	Queens 200 LS links	Queens 200 LS left		
42 836 00	Queens 200 LS rechts	Queens 200 LS right		
46 827 00	Gehäusefuß LS-Box	Foot speakerbox		A 9

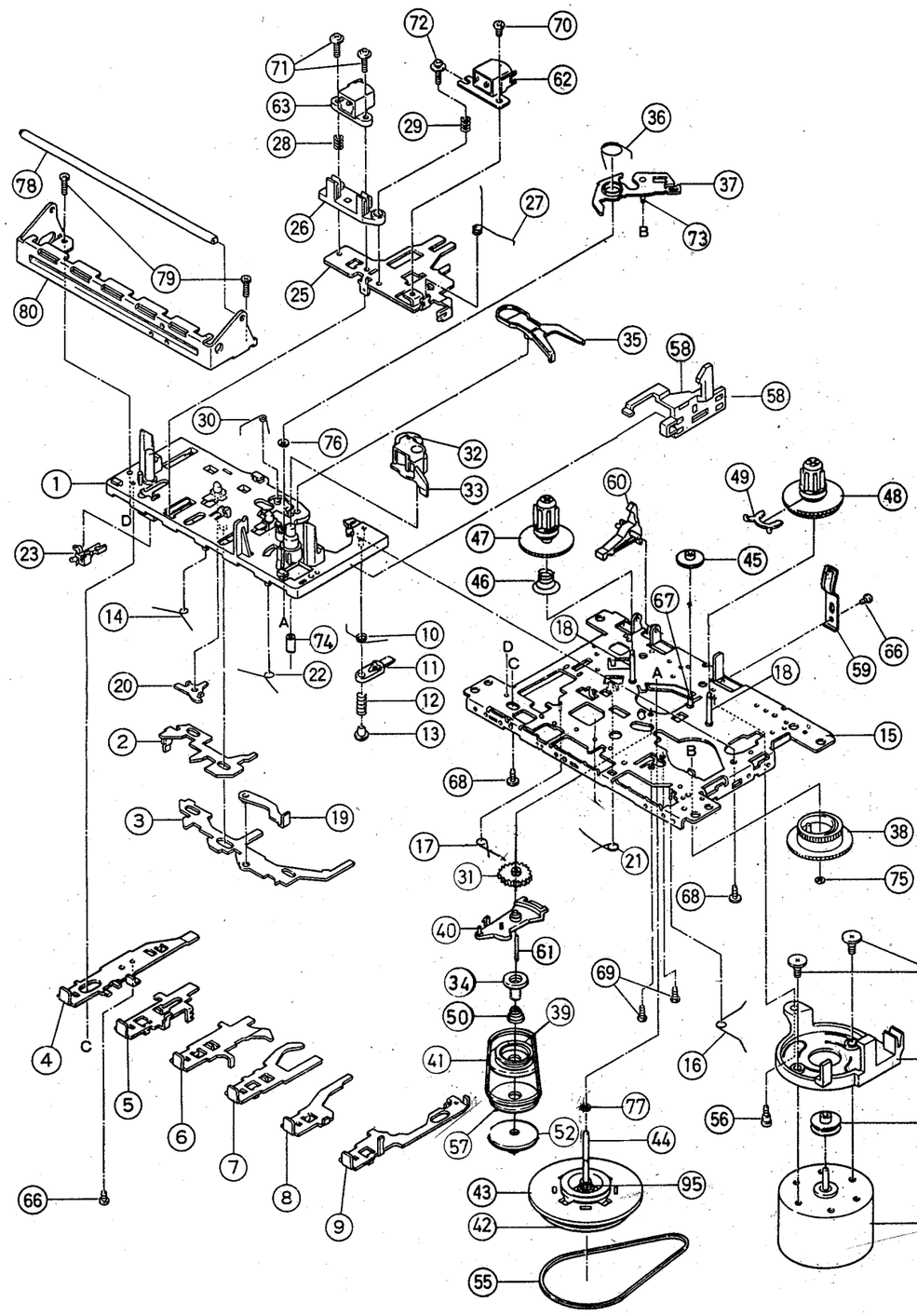
Explosionsdarstellung Gehäuse
Exploded view housing
Explo-Index: A–D



Explosionsdarstellung Cassettenmechanik A/W Queens

Exploded view cassette mechanism R/P Queens

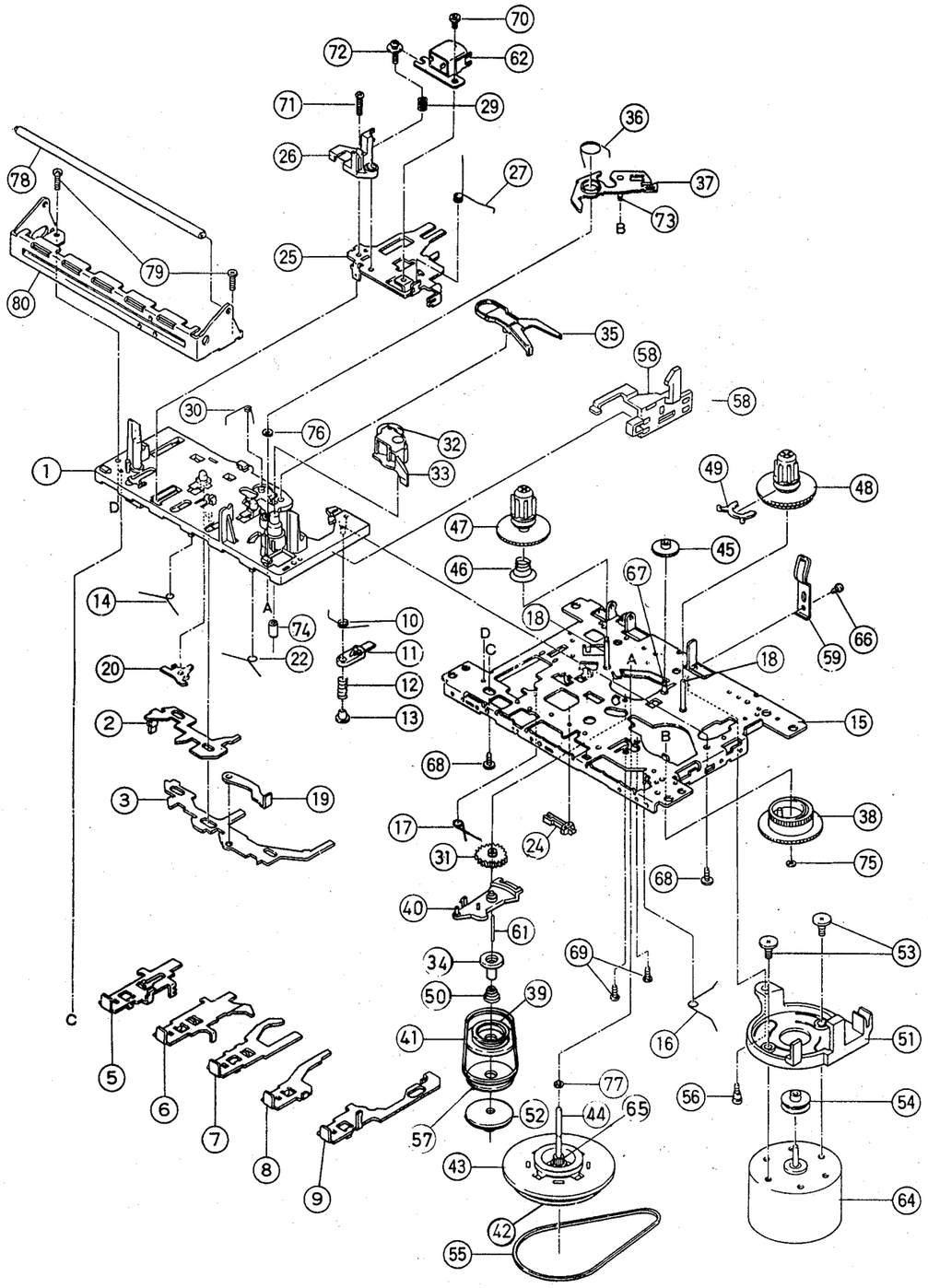
Explo-Index: CM



Explosionsdarstellung Cassettenmechanik Wiedergabe

Exploded view cassette mechanism playback

Explo-Index: CM



Ersatzteilliste Cassettenmechanik Queens 200
Spare parts list cassette mechanism Queens 200

Bestell-Nr./ Part. No.	Bezeichnung	Description	Position	Preisgruppe/ Price key
46 863 00	Feder Pauserasthebel	Spring pause lever	CM 10	A 0
46 417 00	Pauserasthebel	Pause lever	CM 11	A 0
44 130 00	Druckfeder Pauserasthebel	Spring pause lever	CM 12	A 0
44 131 00	Sicherungsstöpsel Pause	Pause stopper	CM 13	A 0
32 428 00	Feder Tastenhebel (Vor-, Rücklauf)	Button lever spring (FF, REW.)	CM 14	A 3
46 864 00	Feder Aufnahmetaste	Spring rec. button	CM 21	A 0
32 423 00	Feder Tastenhebel (Stop, Pause)	Button lever spring (Pause, Stop)	CM 22	A 3
44 132 00	Mikroschalter MSW L 541 T	Leaf switch MSW L 541 T	CM 23	A 4
44 133 00	Mikroschalter MSW-17820 MVDO	Leaf switch MSW-17820 MVDO	CM 24	A 7
45 760 00	Feder Kopfträgerplatte	Spring head panel	CM 27	A 1
32 432 00	Feder Löschkopf	Erase head spring	CM 28	A 3
32 435 00	Feder A/W-Kopf	Spring R/P head	CM 29	A 3
32 436 00	Bandandruckrolle kpl.	Pinch roller assembly	CM 32	B 6
44 135 00	Tasthebel Endabschaltung	Sensing lever stop	CM 35	A 1
44 136 00	Kurvenzahnrad	Cam gear	CM 38	A 2
44 137 00	Rutschkupplung kpl.	RF clutch assembly	CM 39	A 7
44 138 00	Riemen Rutschkupplung	Belt RF clutch	CM 41	A 4
46 865 00	Schwungmasse AW- u. Wiederg.-Laufwerk	Fly-wheel R/P and Play	CM 43	B 7
44 140 00	Zahnrad Vorlauf	FF gear	CM 45	A 1
44 319 00	Feder Wickelteller links	Back tension spring	CM 46	A 0
44 141 00	Wickelteller links	Supply reel	CM 47	A 3
44 142 00	Wickelteller rechts kpl.	Take-up reel assembly	CM 48	A 4
46 436 00	Spange Wickelteller	Sensor	CM 49	A 1
32 876 00	Pulley-Motor	Pulley motor	CM 54	A 5
44 143 00	Antriebsriemen	Main belt	CM 55	A 2
46 418 00	Gleithebel Eject	Eject slide lever	CM 58	A 3
32 459 00	Cassettenandruckfeder	Pack spring	CM 59	A 5
32 451 00	Aufnahmesperrhebel	Record safety lever	CM 60	A 5
34 056 00	A/W-Kopf	R/P head	CM 62	C 3
34 057 00	Wiedergabe-Kopf	Play head	CM 62	B 9
24 513 00	Löschkopf	Erase head	CM 63	B 0
48 001 00	Antriebsmotor SHW 2L00	Drive motor SHW 2L00	CM 64	C 3